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No. I

OVER-MEDICATION IN INFANTS AND CHILDREN.*

B. Bashinski, M. D.,
Macon, Ga.

The subject Over-Medication in Infants and Children should appeal to both the general practitioner and pediatrician. It is a well-known fact that infants and children receive entirely too much medication and in the majority of cases the medication is not given with the idea of benefiting the little patients but to satisfy the mother. It is sad but true that many prescriptions are written solely because the physician is afraid that he will lose the confidence of the mother and then will lose a patient or perhaps will be unfortunate enough to sign a death certificate and will be censored because of the fact that he did not order medication every hour or two. Many of the little sufferers will make a more rapid recovery if given a fair opportunity and with little medication.

Leaving out the question of feeding, the big item in pediatrics, we have but few conditions where constant medication is required or indicated as it is certainly not indicated in feeding. We should endeavor as far as possible to avoid the use of drugs, thereby preserving our greatest asset—the power of digestion. In the majority of cases good nursing, proper diet and hygiene will be our best treatment and we should use drugs only when we find a very definite purpose, which purpose cannot be obtained without them. How often are we consulted by mothers with the request that we give a tonic. Of all the so-called tonics at our command the two best are rest and, at times, change of surroundings.

There are not a great number of drugs

used in the treatment of diseases of children. Very few drugs are indicated and when indicated should be for a single drug. Above all, don't use the so-called "Shot-gun mixtures" with a prayer that one in the group will hit. Should we take the time as we should in every case that comes to us to make a diagnosis, using the modern laboratory methods at our command, then in the majority of cases one single drug would suffice. Keep in mind that at all times infants and children have a slightly different physiology from the adult.

Of the drugs generally used will be found iron in some form, sodium, mercury, santonin, arsenic, glycerin, one or two of the opium preparations, a stimulant as camphorated oil or caffeine and soda benzoate, liquid petrolatum, agar, milk of magnesia, quinine, tincture of benzoin compound and cod-liver oil. Disagreeable drugs should never be given when trying to make them agreeable with syrups, as tolu, orange, wild cherry, etc.; we should keep in mind that they may disturb the digestion and precipitate vomiting and in the treatment of infants and children bear in mind that the best results are obtained when the gastro-intestinal tract is in as good condition as possible.

Adult medication cannot be applied to infants and children. They require an entirely different method of therapeutics.

Antipyretics used indiscriminately are dangerous and if used frequently and in large doses are harmful. At times we are compelled to use of the coal tar products and if so the best and safest to use is phenacetine and caffeine citrate. We are justified to use these only when the temperature cannot be lowered by the application of tepid or cold baths. The patients will be more comfortable and we

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

will get much less depression should we use an ice-cap to the head and hot water bag to the feet when the temperature is around 101 and should it go higher this should be supplemented by sponging and at the same time colonic flushings. I am positive that if this procedure is followed you will find that the temperature will remain reduced much longer than when you use drugs.

All of us know for a fact that we do not have a specific for typhoid fever, pneumonia, infectious diarrhoea or any of the contagious diseases with the one exception, diphtheria. No drug has ever been found which acts absolutely directly upon the causative agent of infectious diseases, diphtheria excepted, then why give drugs in the infectious diseases? All that we can expect is perhaps to strengthen some function that is disturbed and may prove fatal. Practically all of the infectious diseases are self-limited and the natural tendency is toward recovery. The only explanation in giving constant medication is to please the mother and have her say that "Doctor So and So is wonderful for measles or chicken pox."

I would like to say a few words in regard to whooping cough. There may be a few drugs in the pharmacopoeia that haven't been used but they are very few. Of all the diseases of infants and children this one is the trying out ground for every known drug both internally and externally and then after a most faithful trial given up as a failure. In the trial all we have accomplished is a more disturbed digestion and more vomiting attacks.

Vaccine therapy I am sorry to say does not have today the large place that it should in pediatrics. There is absolutely no doubt that whooping cough is most favorably influenced by inoculations of vaccine. The reported failures are due I am sure to giving too small doses. Vaccine should be the only treatment. Nothing by mouth with the one exception, bromide of soda and antipyrine where the children are unable to sleep.

Constipation, the one condition we en-

counter so often, is being treated every day by drug after drug and instead of relieving the condition drugs, as a rule, are aggravating it. Constant medication for constipation is wrong. Much more can be accomplished by the proper diet and training. Constant use of calomel, castor oil and C. C. pills should be condemned. Should we take the time to establish the etiology, which will include first and most important, the diet and habits, an x-ray examination of the rectum and in some few cases cretenism, we would not abuse so many drugs. Why not give foods as orange juice, prune juice, prune pulp, baked apple, peas, spinach, asparagus, or beans. Should a drug be indicated the best are agar and milk of magnesia. All babies will take it if mixed with the milk and very few are disturbed by it. Constipation in very young children should never be treated by drugs only when other methods fail. Use dietetic measures. Enemas and suppositories should only be used temporarily.

Castor oil and calomel should never be given should there be no other complaint than just constipation in either infants or children. Castor oil is responsible for many cases of chronic constipation. There is no doubt but that it encourages constipation. Our aim should be to prevent constipation, not just to open the bowels because of constipation.

Another condition where over-medication is practiced is infectious diarrhoea. So many drugs are vaunted as intestinal antiseptics or astringents and are so in name only. Of the so-called intestinal antiseptics the bismuth salts either subgallate or carbonate are the most serviceable and these should not be prescribed until the temperature begins to fall. We often make a mistake in the beginning of infectious diarrhoea, this being in giving some preparation of opium and when so doing we check Nature's effort to remove the cause. The best treatment in this condition is less medication and more dietetic and hygienic management. Hydrotherapy and colonic flushing for temperature, all

milk forbidden except buttermilk and lots of water. Water is the very best drug obtainable. Opium preparations should be sparingly used. Water should be used frequently and in large quantities internally, externally and eternally. Injudiciousness in diet and especially medication has in many cases interrupted a prompt recovery and has on the other hand caused lesions of the intestinal tract that might prove fatal.

In pneumonia the accepted treatment is the alkaline treatment and in my experience has proved beyond the greatest expectations that it is almost as wonderful as antitoxin in diphtheria. All of us will agree that lobar pneumonia is a self-limited disease. No specific has been found; then why order some medication to be given the little sufferers every hour or two? All of us should agree that the most and all-important indication is to see that the circulation is supported and all of us should agree that no drug should be given in a routine way. Alkalies can be given until the crisis. Pleuritic pain can be relieved by the application of mustard. If extremely nervous, bromide and chloral by rectum. Again the best drug is an abundance of water.

There is no commoner disorder than chronic intestinal indigestion, the condition where we get a history of loss of weight, or perhaps it has been stationary, no appetite, abdominal pain, tires easily or the lids seem swollen, especially in the morning. Before writing a prescription for these little patients just to gratify a mother's heart we should try and seek the cause, as decayed teeth, and some may be classed as atrocious, insisting upon the child remaining at meals until the older members of the family have finished. See that the child has a mid-day sleep which should be insisted upon until the child is six years of age and most important the diet. Almost all cases of chronic intestinal indigestion are due to the carbohydrates

and among these potatoes are the most troublesome. Contrary to general opinion the next are fruits, especially, raw apple, then an excess of milk and feeding at irregular intervals. Few drugs should be used and the very best, when used, is a good preparation of malt.

I am far from wishing to make you believe that drugs are valueless but I do believe in the majority of cases that constant dosing is more harmful than the dietetic and hygienic means at our command.

All of us are acquainted with some physicians who believe that some drugs are supreme in control of diseases, and, too, some few who had rather write a prescription for infants and children than take time to outline a strict obedience to diet, rest and exercise.

Restless mothers are the cause of many prescriptions because of being desirous of doing something instead of watchful waiting but to quote from S. Weir Mitchell, "The mother at the sick bed of her child is, however, a being quite as difficult to manage as her child. All her instinctive maternity is up in arms. Deep in the heart of many mothers there is an unconfessed and half-smothered sense of wrath at the attack which sickness has made on her dear one. Then nothing is too much to give; no sacrifice of herself or others is too great to grant or demand."

In conclusion I would like also to quote from Doctor Richard C. Cabot: "If a physician is honest with himself and intelligent about the respective roles of Nature and man in the cause of disease, knowing how huge is the contribution of Nature, how minute the efficacy of man and his remedies in all except a few of the diseases he combats, he will not be able to say, 'I cured him. I pulled him through.'"

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COMPLEMENTAL BREAST FEEDING.*

Linton Gardine, B. S., M. D.,
Athens, Ga.

I make no apology for reading at this meeting a paper on a subject so ably presented to you at your meeting in Macon two years ago. (1) I believe the program committee of the Pediatric Section selected this subject because they felt it was so important that it should be brought up for frequent discussion.

The rapidity with which complementary breast feeding has gained popularity throughout the country is evidence of its value. Almost every article on the encouragement of breast feeding appearing during recent years, has recommended complementary feeding as of the greatest value; showing how generally it is being adopted. Though this method has no doubt been in use for some years, the greatest impetus to its growth was given by the reports of Sedgwick and his co-workers of their efforts to increase maternal feeding (breast feeding) published in 1917 and at intervals since then. (2)

In 1918 your attention was called to efforts being made to encourage breast feeding, (3) and you were told how the section of Pediatrics of the American Medical Association, at its 1908 meeting, adopted a resolution making it obligatory on the program committee to devote as much time to breast feeding problems as upon artificial feeding. One result of this move was an increase in the study of wet-nursing, and from this study the question naturally arose, "If a wet-nurse can produce enough milk to supply several babies, why can not the average mother produce a sufficient quantity for her own infant?" (4-5) It is now recognized that practically every mother CAN nurse her baby. In perhaps the largest groups studied, above 90 per cent have been able to continue breast feeding. So the contra-indications to breast feeding—I was tempted to say the EXCUSES for not nursing—have been reduced to a minimum. Even acute infec-

tions, operations, and severe conditions which had formally been considered reasons for immediate weaning are now considered at most only to call for temporary withdrawal. (6-7) Nor can the possibility of reinstating breast feeding be overlooked.

The comparative ease with which breast feeding can be re-established was very forcibly impressed on me by a case I had. Being called into the country to see a sick baby, I carried along a practical nurse—a negro with very little scientific training, but good practical common sense. I found a baby two months old whose mother had "not been able to nurse it" (?) for about seven weeks. It was doing very badly on various artificial foods. Explaining the necessity of breast feeding and outlining the method of complementary feeding, I left this negro nurse in charge. In ten days breast feeding had been re-established—the baby became a normal, healthy baby.

We have also learned not to be too quick in concluding that a mother's milk is "not agreeing" with her baby—at least in quality. Fortunately few now think there is any value in ONE examination of a SAMPLE of the mother's milk. In fact Apt says, "We place little reliance on the chemical examination of breast milk as an index of its quality. The composition of the milk as expressed in chemical analysis varies so much during one and the same feeding, and during different periods of the day, that little reliance can be placed on this test." "The quality of the milk is best estimated by examination of the baby." (4) We have learned to be thorough in looking further for the cause of trouble—examining the baby, the mother, their surroundings, habits, etc. (10)

The physician had long recognized the value of breast-milk as the only entirely satisfactory food for the infant, as well as the great dangers of artificial food for babies, and had felt that more mothers could and should nurse their babies, yet there continued to be far too many fail-

* Read at the meeting of the Medical Association of Georgia, Columbus, Ga., May 4, 1922.

ures. For a time it was thought that by relieving the mother from the supposed "strain" of frequent nursing they would produce an abundance of milk, and they fell into the error of supplemental feeding. Then appeared the happy observation that stimulation improved secretion, and in order that this natural stimulation might not be interfered with while the infant still should receive sufficient food, complementary breast feeding was developed.

It is only necessary to become familiar with the method known as complementary breast feeding and to put it into practical use for a short time to be convinced of its value. Though this method has been frequently, fully described, there may be some who are not entirely familiar with it and who would appreciate a short detailed outline of its working plan. But before examining the method it is well to get in mind an understanding of the conditions in which it is useful—or necessary. Remember always that the primary object of complementary breast feeding is the encouragement of full breast feeding. It is used whenever an insufficient supply of breast milk is present, with the intent of increasing this milk supply to a point where no artificial food will be necessary; or while reinstating breast feeding; or occasionally to complete the feeding for a mother whose milk supply can not be brought up to sufficient quantity. In mathematics the complement is an angle necessary to complete a right angle; so in infant feeding complementary feeding is the method used to complete the right method of feeding—which is breast feeding.

METHOD. To be successful it is desirable to first assure the mother that she will be able to entirely breast-feed her baby, if she makes the effort, explaining that the extra food you advise is only to help out until this object has been obtained. "Successful maternal nursing depends largely on faith—faith of the doctor in the ability of all mothers to nurse, faith of the mother in her ability to nurse. It is influenced by the proper regime and

nursing technique." (8) Have it understood that nursing at the breast must be carried out at each regular feeding time, the breasts then being emptied by milking—the manual method is far better than any kind of pump—(almost all pumps are so unsatisfactory as to be a nuisance). Manual milking is not difficult once the art is acquired. Some of you may have seen a very attractive display of infant incubators at the exposition in San Francisco in 1915. If you were fortunate enough to go behind the scenes, so to speak, you saw a squad of wet-nurses busily milking, who were quite expert. It was surprising to see the ease with which they obtained quantities of breast milk. Of course you may not wish to tell a mother that you are comparing her to a cow, but if you bear in mind the way a cow is milked, and the effect on her milk supply of proper and improper emptying of her milk glands, and apply this principle to the human mother you will get the desired result.

It is the stimulation derived from the regular and complete emptying of the breasts which causes an ever-increasing supply of breast milk. "Persistent demand on the breast is a most important and continually neglected factor in the establishment, maintenance and re-institution of natural or breast feeding. When the importance of the continued demand on the breast is underestimated, the breast feedings fails." In this present day of endocrinomania, I am often asked as to the value of various gland extracts as galactogogs! I reply that we have, as yet, very little knowledge of their value (or danger)—but we have a well understood, perfectly harmless, and entirely satisfactory, physiological measure at hand in regular stimulation.

The amount of additional food given and its strength must be carefully considered. It is well if possible to control this by weighing the baby before and after nursing—bearing in mind however the danger of worrying the mother if she watches this procedure too closely. Weak mix-

tures are usually quite satisfactory as it is only necessary to add sufficient calories to bring the whole feeding up to normal. Various foods have been recommended as of value as an addition to breast milk. Casien has been suggested, and recently Sauer reported excellent results with the use of dry protein milk (9)—a produce which may prove of much value to pediatricians in our warm summer; but, as a rule, a simple dilution of cow's milk is quite satisfactory. As the supply of breast milk increases the artificial food is gradually decreased.

Always insist that thorough nursing at the breast is carried out before the bottle is given, and be careful that the baby shall not find it easier to get its food from the bottle than from the breast. This, next to the failure of stimulating the breasts, is largely responsible for the failure of supplemental feeding. A baby will quickly learn that it gets its food with less effort from the bottle than from the breasts and becoming lazy, fail to produce the proper stimulation of the breasts, soon weaning itself. Indeed supplemental feeding is an excellent method of weaning a baby.

Complemental feeding then means that as each regular feeding time arrives the baby is put to the breast first and encouraged to nurse, it is then immediately, given from a bottle sufficient food to satisfy its requirements, and the mother's breasts are milked completely empty.

When discussing any method of infant feeding one is always tempted to stray from the immediate subject into the many, so very important, side issues. Habits play such an important part in life, and habits are acquired so early—quite easily in infancy—that it would be well to keep in mind the advantage of helping the baby towards forming good habits. Comfort and contentment are such valuable aids to maternal nursing, it would be well to strive always to obtain these for the mother, making breast feeding a pleasure and not a punishment. (10) Environment influences the development of mankind—exam-

ine always the infant's surroundings and see that they are in proper order; remembering that this should be done long before the baby is born. A few hours of prenatal preparation prevent many of postnatal perplexity.

We all agree that the only method of infant feeding that even approaches the ideal is breast feeding: That there are many factors to be carefully considered to insure the successful accomplishment of breast feeding; but when difficulties have arisen and the supply of breast milk is insufficient or even apparently entirely gone, we have in complemental breast feeding a method which, when properly and conscientiously carried out, other faults being carefully searched for and corrected, will be of inestimable value in helping to regain the desired result, complete breast feeding.

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DISCUSSION OF "OVER MEDICATION IN INFANTS AND CHILDREN" BY DR. BASHINSKI, AND "COMPLEMENTAL BREAST FEEDING" BY DR. Gerdine—

DISCUSSION.

Dr. W. A. Mulherin, Augusta:

We have heard two extremely practical papers, and it seems unfortunate that time will not permit a separate discussion of each paper. Pediatric papers are very important papers to be presented before the Medical Association of Georgia, and are entitled to the same consideration and time given to other papers. In substantiation of this point I might correctly say that one-fourth to one-third of the general practitioner's practice is made up of pediatric practice.

Dr. Bashinski has brought out some very excellent points with regard to over medication in infants and children. I think we have all seen babies we were called to attend for a "cold." The ever-present quinine was there, and when the child recovered from the cold we had to treat it for indigestion, resulting from too much medication. If Dr. Bashinski's advice is followed, of never giving a dose of medicine to a baby or child unless there exists some direct indication for it, I think the babies and children will be better off.

The points brought out in Dr. Gerdine's paper cannot be too strongly stressed. If every physician, mother and nurse in Georgia would follow his advice as to complemental feeding, the infant mortality in Georgia would be reduced one-half. Four-fifths of the deaths, in children under one year of age, occur in artificially fed babies. I feel exactly as Dr. Gerdine does regarding complemental breast-feeding. It is my firm belief that every mother, with very few exceptions, can nurse her baby, if properly coached by the physician. Also, I will say that every mother's milk agrees with her baby, with very rare exceptions. Complemental breast-

feeding today is out of the experimental stage. It is simple, practical and scientific; the adoption by the medical profession of its general use will simplify the whole problem of infant feeding, and in addition will save many babies' lives.

To successfully use complementary breast-feeding, there are five essentials: 1. The physician attending mother and baby must be firmly convinced that the mother can nurse her baby. 2. The mother must be firmly convinced that she can, and fully determined that she will nurse her baby. 3. The breasts must be stimulated by the baby nursing on each breast ten minutes, at regular nursing intervals. 5. Patience and determination must be exercised by both doctor and patient.

Dr. L. C. Allen, Hoschton:

I get up to make one observation. We all know that the homes of the great majority of the colored people in our towns and cities, as well as in the rural sections, are extremely bad, and that the most insanitary surroundings to be found anywhere are in the homes of the negroes. Now, I have never seen a negro woman who did not nurse her baby, and I think it is due to this fact that the death rate among negro children is not appalling.

Dr. C. W. Curtis:

I want to indorse everything that has been said, but one or two things especially. One thing is buttermilk diet. I have fed it to hundreds of babies, and I have never seen one that could not take it. Of course, you have to give them more of it than sweet milk. In thirty-five years' practice I think that half of my patients have been children, and consequently I think we all ought to be baby specialists.

Dr. M. A. Clark, Macon:

I heartily approve of the papers that have been read, and I wish that ideal conditions existed, as suggested. Until they do exist, there will be a necessity on the part of the physician in treating children to prescribe some remedies. Medicine is an art as well as a science, and I sometimes think that we neglect the art, especially in the management of children. I heartily agree with what the essayist said about making the medicine as palatable as possible. For that reason I have never prescribed castor oil. One of the greatest essentials in treating your patients, especially children, is to make a proper diagnosis, and one of the first things to do is to make friends with the children. After a few times of holding his nose and poking down castor oil, and having the mother remind him that that is what the doctor gave, you can not very readily get close enough to the little fellow to make a thorough examination. When the mothers get wiser, then perhaps we may use less medicine, but until that time it behooves the physician attending children to become wise, to learn more about materia medica and use wisely such remedies as will make his patients better and get them well. While we do not give medicine to please the mother, often it is better to give a little to soothe the child and keep down the temperature, and so keep the mother from being upset and upsetting the child.

I am surprised that the doctor suggested the use of caffeine. As a matter of fact, one of the safeties of the coal tar preparations is the slowness of absorption of these preparations. Small doses are not depressing, but are stimulating.

I want to indorse heartily the complementary feeding and to add what was not brought out—that if a mother cannot nurse her baby, she can at least try. Insist upon her trying. Stress the fact that though she may have only a teaspoonful at each nursing, it has been demonstrated that that small amount of the mother's milk makes more digestible the modified milk you give the infant.

I am so glad that these points are being brought out. By perseverance we can get good results.

Sometimes I find that the mother gets dissatisfied and sends for the baby specialist, and while he advocates complementary feeding in the association meetings, he kindly allows the mother to put the baby on the bottle.

I want to indorse the effort to get mothers to nurse their babies. It will reduce the mortality. I also want to indorse the study of these questions that is going on. We must become, to some extent, pediatricians ourselves, and so acquaint ourselves that our patients and world at large will realize the worth of the family physician.

Dr. S. A. Visanska, Atlanta:

We all agree that over-medication is harmful, not only to the child, but to the adult. When we realize that most of the diseases of infancy are acute and curable and that nature, after all, is our greatest physician, then we shall realize more fully that we should not use what we term over-medication. As the doctor said, with the proper diet, proper hygiene, and good water, internally and externally, we shall not have to use a great many medicines. But in selecting a medicine or medication for any disease, there are three things which we should bear in mind. After making what you might term a diagnosis, you ought to know what to use—what the medication is—how to use it, how often to give it, and when to use. How, what and when should be the three things we think about when we use any drug. If you don't, you will fall down on the case nine times out of ten.

Of course, materia medica gives a wide range of thought. An ordinary drug like calomel might be used. One doctor will order one-tenth grain, another a fourth, another a half, and another one grain. Why is that? It is because we interpret our materia medica in a different way, just

as ministers interpret texts. You can give three ministers the same text from the Bible, and every one will interpret it differently, and that is what physicians will do with any drug. We often lose sight of that one fact.

Some one has said that the best doctor is the one who knows the most of the fewest drugs. That doctor said a mouthful, and I agree with him.

In regard to complementary feeding, I think we all agree with the doctor that every mother, if possible, should nurse her own infant. The Almighty gave the mother the breast for that purpose, and I think we ought to do all in our power to have the baby breast-fed. Psychology is a great factor in the nursing of the infant. I have been told of cases where the child was bottle-fed, or partially so, and I asked why. "Well," was the reply. "I could not nurse the first baby, so I thought that I could not nurse this one."

Dr. J. M. Poer, West Point:

Only one point has not been brought out in regard to complementary feeding, and that is the nervous element that enters into the secretion of the milk must not be forgotten, and it is one of the greatest factors in inhibiting the secretion of milk. If you can assure the nervous mothers, when the children begin to fret and cry and the milk supply is cut off, that they can be helped, then you can succeed in getting the baby fed. I think that mammary gland, in proper form, will stimulate the secretion of milk, but if you prescribe the gland as dispensed by the drug stores you will not get results. While I am not advertising any institution, I have been prescribing mammary extract from _____, and find it very satisfactory. When you prescribe freshly prepared glands, they will stimulate the production of milk and will relieve the nervousness, and the children will get to sleep instead of crying and fretting.

Dr. W. N. Adkins, Atlanta:

The two subjects just presented are extremely important. I want to stress one point from Dr. Bashinski's paper: With the exception of congenital conditions and acute infections or contagious diseases, infants and children do not have anything other than gastro intestinal disturbances. The most important therapeutic part of pediatrics is the question of proper diet. Over-feeding and incorrect feeding do more harm than over-medication as they are more common. Ninety-nine children get too much to eat where one does not get enough. In treating children for digestive disturbances the most important thing is to remove the cause and correct the diet. They need but few drugs.

Dr. Gerdine's remarks about prenatal care are of great importance. Most mothers can nurse their babies if properly attended before and after child birth. I have seen but few who did not give some milk. Their state of mind has considerable influence on the quantity and quality of their milk. Breast feeding is without question the natural and therefore the best food for infants and in addition to being in proper proportions it contains unknown elements which gives the infant varying degrees of immunity against infections.

Regarding Dr. Poer's remarks about the use of mammary and placental extract as a galactagogue, the moment that the placenta is formed one of its purpose is to supply an internal secretion, which secretion inhibits the ovary and posterior pituitary and also stimulates the mammary gland which gland in turn also inhibits the ovary and posterior pituitary and upon the expulsion of the placenta the mammary gland takes up its function added to its own. I have never used the combination of mammary and placenta extract, but have found that administering placental extract early where the milk supply was waning, will in the majority of cases give good results, if your extracts are potent, given in capsule form and obtained fresh from a reliable manufacturer.

Dr. Turk:

This question of nursing babies is one of vital importance, I think. Sometimes the fact that not as many mothers nurse their babies as could is because a mother in some neighborhoods goes to some man who is a baby specialist, and he takes a sample of her milk and tells her that it does not agree with the baby, and consequently she has to resort to other means. Recently I had a young woman patient who had given birth to a baby, and because the milk did not appear on the third day, as it usually does, she became greatly alarmed. We know that grief, fright, and those emotions have a great deal to do with inhibiting the flow of milk. She cried her eyes out. After a day or two, without waiting to see how it would turn out, she was rushed out to another man, and told that her milk did not agree with the baby. And these "examinations" are often made by putting the sample in a test tube and looking at it.

If the baby is bottle-fed, it gives the mother more latitude. She can stay out later in the day and stay out longer at a time. In the vast majority of cases, if they would try, if they would just get behind this movement and say, "I am going to nurse my baby," there would not be so many little short graves scattered about over the face of this country.

Dr. C. P. Ward:

I heartily indorse Dr. Bashinski's paper in regard to medication. One thing I want to bring out is this—get the confidence of the mother. I often use a very commonplace

illustration—if the dog or cat or cow gets sick, do you dose it much? Does it eat? You cannot get it to eat. Let nature take its course through the early stages. If you sit down and reason with them on that basis, you can gain their confidence, and you can teach these mothers to follow you along on nature's definite plan, and they do not desire so much medication.

The question of breast feeding, to my mind, is this: Any mother with one breast can certainly supply milk for the average baby if she is properly coached, properly fed, and has proper surroundings. It is a question of vital importance to our country and to every country, because the life of the country is our little ones.

As to castor oil, I may say that I seldom use it, and never except when they have been clogged by something we want to get rid of quickly. Diet and sanitation are the main things.

Dr. L. A. Baker, Tifton:

This, to my mind, is the most important subject that will come before this meeting at this time, or any other time, for that matter, because we are dealing with life in the beginning, and we are all aware of the great percentage of infant mortality. I am glad to state that I believe a new day is dawning for the profession and for the babies with whom we come in contact. I remember that years ago I gave a great deal of medicine, and I remember when all my friends and associates gave a great deal of medicine, but the day has come when we give very little, comparatively.

I cannot agree with all that has been said about castor oil. I guess I have given a barrel of Squibb's castor oil in the past ten years. It is a great remedy when properly given. I think that we can give too much, but the same can be said of any other drug.

I heartily agree with the dictum of giving water internally, externally, eternally, and lots of it, and all the time. I recall a case I saw last summer, acute dysentery. The child had been sick several days, and was a very restless, intractable child, could not be kept quiet day or night, and could not be given medicine or food. We moved it up to our little place, and after we got it there gave it only one dose of medicine, and that was milk of magnesia. The child picked up wonderfully and made an uneventful recovery. We handled it with protein milk, water, and irrigation of the colon.

Now, about breast feeding, I want to ask one question. How long after the milk has dried up can it be brought back to the breast? After how long an interval is it worth while to work on the breast to try to get the function restored?

Dr. Bashinski, closing the discussion:

I want to thank the doctors for the very generous discussion.

Referring to Dr. Clark's criticism in regard to giving caffeine, I stated that I usually give a combination of phenacetine and caffeine. To prevent undue stimulation or depression, give both, not one singly.

There is only one point that has not been brought out in the discussion of Dr. Gardine's paper on complementary feeding, and that is the number of cases we see brought in with a history of colic after every nursing. We do know that the so-called three months' colic is almost unknown at the present time, due, I am sure, to complementary feeding. Usually when these cases are brought in, the mothers are giving from one to six medicines. The condition is due to nothing in the world but hunger, and the child should have complementary feeding. Of course, that is determined by weighing the baby before and after feeding, for that is the only way to determine whether the baby is getting sufficient nourishment. It should be done for every feeding for at least forty-eight hours, to find out the amount the baby is getting at each nursing.

Dr. Gardine, closing the discussion:

It is very encouraging to see what general agreement there is on the subject of breast feeding and complementary feeding. I hoped that all would agree, and they have.

There are one or two side points brought out. Dr. Bashinski said he was going into the discussion of my paper, and I think that I might go into his and call attention to the over-medication of nursing mothers. In regard to the use of gland extracts of various kinds to stimulate the breast, it is somewhat interesting to note the fact that those who use them all use different glands. I think that if they would use a little distilled water they would get the same results. I do not think the glandular extracts, in whatever form you use them, have much effect in stimulating the breast. It is the confidence you arouse in the mother by giving her something that does the work, and not the glandular tissue, in my opinion. It is the stimulation of the glands that is going to produce the increased function, and the stimulation must come by getting them to work in a natural way, and not stimulation by some gland you are putting in.

Dr. Turk made one remark that pleased me. He said that pediatricians examine milk by putting it in a test tube and looking at it. That is the value of the average chemical examination of milk. I think it is much better to get a sample of milk and look at it in a test tube than to examine it chemically and not know anything about the total value.

As to the length of time the breast can be dry and

the milk be restored, I think eight weeks is the longest interval after which I have been successful in restoring it, but I think cases have been reported after three months. Some cases have been reported by virgins who have been made to produce milk, and I have heard of milk being produced in the male breast. Certainly it would not do any harm to try to restore the function, and I think under three months you can certainly safely try it, and I believe that you will succeed in a good many cases.

ANTITOXIN AND INTUBATION IN DIPHTHERIA.*

W. N. Adkins, M. D.

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When von Behring, in 1890, introduced diphtheria antitoxin, he presented to the medical profession and thru this medium to the people at large, the one perfect 100 per cent specific. Every primary case of diphtheria should recover promptly, without complications or sequellae. Everything being equal, such would be a fact. In spite of this perfect specific there are more than 15,000 deaths annually in the United States due to diphtheria. While it is true that the actual mortality has been reduced about 75 per cent since the introduction of antitoxin there has been no apparent reduction in the number of cases per population. The current literature is mostly along the lines of prophylaxis in connection with the Schick test and the administration of the toxin antitoxin mixture. Very little is said concerning the proper dosage of antidiphtheritic serum. Dunn, of Harvard, in his text book recommends 3,000 to 5,000 units in mild cases, and in the malignant type and severe cases of laryngeal diphtheria, from 10,000 to 15,000 units. Sheffield, of New York, recommends in children under three years of age 3,000 to 5,000 units and those over this age 5,000 to 10,000 units. Griffith, of Philadelphia, recommends in the most severe types 7,000 to 10,000 units. Kerley, of New York, says 5,000 units should be given at the first injection. He says, "I have not found it necessary to give more than 30,000 units to one patient." Schick, in some recent experimental work on dosage of antitoxin, meas-

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

uring the results by the effect upon his cutaneous reaction, recommends the following: In mild cases 100 units per kilogram of body weight. As a kilogram equals approximately 2 1-5 lbs., he recommends for a child weighing in the neighborhood of 50 lbs., 2,500 units for the mild and 13,000 units for the severe cases. One of the editors in answering a query in the Journal of A. M. A. states that physicians of the largest experience in treatment of diphtheria of a severe degree advocate from 20,000 to 40,000 units in cases of that type. He also states that such amounts are not harmful and that an excess does no harm, but that too little allows irreparable damage to be done.

Dr. Geo. H. Weaver, of Chicago, investigating the probable cause of 147 fatal cases in the Durand Hospital, found that a large number of these cases received no antitoxin at home during the early stages of the disease and that those who had received antitoxin were only given small doses, and then usually late after the first appearance of the symptoms. In estimating the causes of the fatalities, he gives two reasons, the most frequent being neglect by parents in failing to secure the proper early treatment; and the other, inefficient professional care. He gives several ways in which physicians erred. (a) Failure to make culture from all sore throats. (b) Failure to administer antitoxin at once and in every case which looks suspiciously like diphtheria, without waiting for the result of cultures, or in the presence of a single negative culture. (c) Failure to follow up patients with sore throat after seeing them once. (d) Insufficient doses of antitoxin, especially in toxic cases. (e) Failure to get the antitoxin quickly into contact with the circulating toxin. (f) Confusing diphtheria with other conditions. He states that anaphalactic shock from antitoxin is a rare occurrence, and compared with the danger from diphtheria is infinitesimal and to be ignored. He advises the discontinuance of packages of less than 5,000 units. James A. Hayne, State Health Officer of South Carolina.

presents facts and figures showing that since his state began the free distribution of antitoxin there has been a marked decrease in the death rate from the disease. For instance, in 1900 the death rate was 43 per 100,000 population and that this was gradually reduced and in 1918 was only 18 per 100,000 population.

In an article in the Journal of A. M. A., John F. Hogan, Director Bureau of Communicable Diseases in Baltimore, states, "for the years 1919 and 1920 there were 246 deaths in Baltimore due to diphtheria of various types. 202 or 82.11 per cent were laryngeal. He states that in 1882 the death rate in Baltimore from diphtheria was 263 per 100,000 living population for that year. He remarks that this appears to be the highest known death rate and that in the years 1917, 1918, and 1920 the death rate was 9.75, 11.84, 13.51 respectively per 100,000 population for all forms of diphtheria." The comparison between these figures is merely one instance, showing the difference in death rates before and after the introduction of antitoxin.

Using these figures as a basis it would seem that with around 15,000 deaths due to diphtheria about 12,500 of these die of the laryngeal type. Statistics show that about 83 per cent of deaths from laryngeal diphtheria occur in children under six years of age, therefore this percentage occurs in the pre-school age. So it appears that Schick testing and immunizing with the toxin-antitoxin mixture of school children will do very little towards the eradication of the disease, regardless of how much it would do for children over six years of age. Hogan, in another article, states "for a period of three or four years in the Baltimore City Health Department, in a series of cultures taken from persons who came directly or indirectly in contact with clinical cases of diphtheria, 97 per cent showed positive cultures." Taking such figures as a fact these 97 per cent must be classed as carriers, at least temporarily.

If we are ever to eradicate diphtheria I can only see two ways to do it. First, to

Schick test all children over two months of age and administer to all positives, the toxin-antitoxin mixture, which is supposed to confer immunity for life. There is to be considered an occasional error in making the Schick test.

The other is by educating first, the parents to seek medical aid promptly for their ill children, particularly where there is suspicion of a sore throat or croupy cough, voice or breathing; and second, the physician to be suspicious of all sore throats whether or not there is any visible exudate or false membrane, culture these throats and upon presentation of the slightest clinical evidence of diphtheria, administer antitoxin promptly, regardless of the result of the culture. Personally I have seen numbers of cases of undisputed diphtheria present repeated negative cultures. From 1907 to 1912 I was on the resident staff of the contagious hospitals of the New York City Health Department and it was my privilege to see and treat quite a large number of diphtheria cases of all types and degrees of severity.

The purpose of this paper is only to stress the extreme importance of early recognition of diphtheria and administration of antitoxin in adequate doses, regardless of the number of units necessary. If sufficient amount be given the first dose, one dose will prove curative. Antitoxin acts by attacking the toxins of the disease and by stimulating the cells to produce more natural antitoxin. It has no effect on the organic or systemic damage already done by the toxins. For instance, it will not benefit a diphtheritic myocarditis or paralysis, but given in sufficient amounts early enough, will unquestionably prevent such complications or sequellae. There is no accurate scale as to dosage. Each case is an individual with an unknown degree of immunity against this particular infection, and an apparently mild infection may grow rapidly worse and vice versa. The height of temperature is not a dependable guide in indicating the severity of the infection. The majority of the severe late untreated or undertreated

cases have a normal or subnormal temperature due to the toxic disturbance of the nervous system. However, temperature above $102\frac{1}{2}$ degrees usually indicates a mixed infection or complication. I have made it a rule for years to use 20,000 units as a minimum dose even in mild cases, and I have yet to see a bad result from such dosage. There is nothing to be gained by dividing doses of antitoxin, though it will quite often prove necessary to give several doses. One should give in the first injection the amount considered curative. I also strongly advocate giving antitoxin intravenously in cases of more than moderate severity, if circumstances are favorable, and in all septic cases and those with laryngeal involvement even if necessary to cut down on a vein. Experiments have proven years ago that 5,000 units in the first 24 hours is as efficacious as 25,000 units at the end of the second 24 hours. Also that it takes at least 48 hours for the entire amount, given subcutaneously at a single injection, to get into the circulation. The disappearance of the tumor only means that the liquid portion of the serum has become absorbed and not the entire bulk. The advantages of intravenous administration are too obvious to warrant detailed description. We all know we inject serum subcutaneously for its ultimate absorption into the blood stream. Therefore, when we put this serum there directly no absorption is necessary. Antitoxin is nothing but blood serum containing antibodies from an immunized animal and the whole purified, sterilized, and rendered fit for subcutaneous or intravenous administration.

Anaphalactic shock of any degree of severity is extremely rare following the administration of antitoxin. It is only seldom you will find such a case reported. A light chill will usually follow the intravenous administration but is seldom of consequence. During the first few years after the introduction of antitoxin and before the manufacturers learned how to remove the impurities and cut down the bulk by separating the anti-

toxic globulins from the greater part of the non-antitoxic proteins, there were probably many severe reactions from its use, but several reliable manufacturers of this serum have for years produced it in such a manner that one need have no hesitancy about its administration. I gave my first dose about ten years after it came into general use and continued to give and saw it given many times daily for over five years in hospital work, and have used it numbers of times in my private work and have yet to see one single bad result from its administration, either subcutaneously or intravenously in doses of from 1,000 units for immunization, to 75,000 units at a single dose.

I will not go into the treatment of diphtheria other than antitoxin, as such is purely symptomatic, except to call attention to the fact that the toxin does its greatest damage to the heart and kidneys and in its depressing effect upon the nervous system, and by damaging and crippling the endocrines, particularly the adrenals. I have found it quite useful to support the adrenals in all cases. For general stimulation I do not believe any drug equals alcohol. If we doctors were only called early enough in all cases and give sufficient antitoxin, no other treatment would prove necessary, but unfortunately we are quite often called in to see a case in which the disease has gotten a vicious start.

Intubation and Laryngeal Diphtheria.

Laryngeal diphtheria unlike the ordinary type, is more difficult to diagnose, more fatal and requires larger doses of antitoxin. The same applies in this type as in all others; early recognition and administration of sufficient antitoxin, then intubation and tracheotomy will not prove necessary. Be always suspicious of croup which continues without considerable improvement after sunrise, and of croup that begins during the day time. It is but a waste of time taking cultures in these cases, with a lack of clinical evidence on an ordinary inspection of the throat. True laryngeal diphtheria in its beginning does

not present clinical evidence above the vocal chord and the germ is not in the throat, except when it will occasionally extend upward. The extension is usually downward. Quite often the involvement in the larynx is edematous without membrane formation, but nevertheless is diphtheritic.

We are indebted to Bochet, of Paris, who first introduced the idea of relieving stenosis of the larynx by means of a tube introduced by way of the mouth, but the late Dr. Joseph O'Dwyer, of New York, receives the credit as the originator of the intubation set he devised and later modified into what is now in general use. Several have attempted to modify and improve O'Dwyer's idea, but none have even approached success. In these he produced instruments which, in the hands of the skilled and trained, perform one of the quickest and most effective and dramatic operations in all surgery. This operation, however, is at best but a mechanical aid, allowing the patient the means of getting sufficient oxygen, and thereby allowing more time for curative measures. One might as well attempt to swim after reading instructions, as to attempt to intubate the larynx without proper training and practice in the particular art. An intubation properly done is harmless in itself and produces no trauma, but in the hands of a novice this operation is capable of untold damage to the patient. However, the chances of ultimate recovery are considerably lessened if intubation be performed, because of the frequency of broncho-pneumonia in addition to lowered resistance in general, accidents to the tube, etc. Proper training on the live subject, following practice upon the cadaver, can only be secured in hospitals handling numbers of these cases. It is useless to enter into the discussion of the technique of intubation, but I would like to suggest that previously untreated cases should be intubated early. The progress of this type of diphtheria is usually very rapid and unless seen early and sufficient antitoxin given, intubation will prove necessary. The effect of the

diphtheritic infection upon the heart is severe and an additional tax placed upon it by difficult respiration should not be allowed. The superiority of intubation over tracheotomy, I believe, is unquestionable. My personal experience with tracheotomy has only been in late cases of extreme emergency, in types where intubation failed to relieve and my mortality has been about 95 per cent. However, unless an operator skilled in intubation is available, early tracheotomy is decidedly to be preferred. While I was doing hospital service on these cases about 40 per cent of intubated cases developed bronchopneumonia and about 65 per cent of those were fatal. Since 1912 when I entered practice, I have intubated 45 cases, with but one single pneumonia and that in a boy twelve years of age who, however, recovered. Laryngeal diphtheria is extremely rare in a child that old. Four of these 45 cases were fatal, three of them were past relief, dying very shortly after intubation and one coughed the tube out and died of suffocation before I could reach him. I quote these figures to illustrate the difference in complicating infections of intubated cases in private homes and in hospitals. However, the cases referred to in hospital work were mostly from the crowded tenement districts in greater New York and the majority had received no antitoxin up to the time of necessary intubation.

In a very recent article in the *Journal of A. M. A.*, Dr. Chas. A. Thomson, Resident Physician of Willard Parker Hospital in New York, describes a method in use there of removing loose exudate from the larynx and trachea to avoid intubation. He describes the technique with the direct laryngoscope and specially devised applicator. He very wisely closes his article by saying this method should only be employed by those experienced in laryngoscopy and intubation.

Conclusions:

I am taking the liberty of disagreeing with the above quoted prominent authors of text books on pediatrics, in that I con-

sider the doses of antitoxin recommended inadequate on the whole. With so effective a remedy and specific as antitoxin at hand, it behooves the medical profession to reduce the number of fatalities from diphtheria by early recognition and administration of sufficient antitoxin, not only to save life but to prevent complications and sequelae. The patient may continue to live when insufficient doses of antitoxin are administered, but many will be handicapped for life by the permanent damage done by the toxins of diphtheria.

If sufficient antitoxin is given early in the disease complications and sequelae will rarely exist. It appears that many physicians of small experience with diphtheria rely too much on laboratory reports of cultures and thereby at times postpone administration of antitoxin.

One would do well to seek to avoid the enumerated causes of fatalities listed above, by Dr. Weaver's article, as they seem to thoroughly cover the ground.

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CONTROL OF THE COMMON CONTAGIOUS DISEASES.*

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The problem of control of contagious diseases is one which is encountered at times by every physician, regardless of his specialty. As a public health measure it assumes vital importance as a protection to the community and is fundamentally connected with present ideas of preventive medicine.

The modern health movement originated in England nearly a hundred years ago. For many years it was thought that filth with decomposition of animal and vegetable matter gave rise to poisonous gases or to living germs which were carried to human beings, causing epidemic diseases. Foul odors were considered dangerous and a sign of emanations in the air which were seeds of sickness and death.

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

These ideas led to the adoption of sanitary measures which, by removing filth, did much toward lowering the death rate, even though the original ideas were fundamentally wrong. The chief errors were that disease bred in filth instead of being merely carried in filth; that all kinds of dirt were dangerous, not merely the secretions and excretions of the human body; and that infectious diseases were usually air-borne. Some of these erroneous theories are still prevalent. We now know that infectious diseases do not breed in filth or with rarest exception, in anything else except bodies of men and animals. They are transmissible diseases and spread from person to person by direct contact with an infected patient or indirect contact through his secretions or excretions. Infection usually occurs through the mouth by means of food, fingers, flies, water, milk, and objects recently infected with fresh secretions. Richardson says, "It is erroneous to suppose that a room occupied by a patient with an infectious disease is permeated by the virus. It is the thermometer and tongue depressor, the nursing utensils, the pillow slips, nurse's hands and other things likely to be soiled with secretions which are the real sources." On recovery of the patient and by the time the infectious period is over it can be assumed that the virus in the room is either dead or non virulent. It is sufficient to clean thoroughly with soap and water those things which have come in contact with the patient. Linen and utensils can be boiled and antiseptics used in other articles. Mattresses and pillows can be sterilized or aired. Fumigation is unnecessary. This has been shown by Chapin at Providence and by recent experiments in New York City. Statistics in Providence show that the ratio of recurrences was slightly lower in the years after fumigation was abandoned than before. Also this ratio is lower than that of Baltimore where terminal disinfection has been well carried out. In Providence fumigation after diphtheria was abandoned in 1905, and after scarlet fever in

1908. In the boroughs of Bronx, Queens and Richmond of New York City fumigation has been omitted since 1914 and has not been followed by any increased prevalence of scarlet fever, diphtheria or measles.

It is an impressive fact that the death rate from diphtheria in many of our cities has showed no decrease in the past twenty years. Weaver studied this condition in Durand Hospital, Chicago, and found that many of the fatal cases had received no anti-toxin at home in the early stages of the disease, or only small doses late after symptoms appeared. Analyzing the causes he found that neglect by parents was the most frequent reason for failure to secure early treatment. The second reason cited was inefficient professional care. Among the ways in which physicians have erred he lists (1) failure to make cultures from all sore throats; (2) failure to administer anti-toxin in suspicious cases without waiting for report of cultures; (3) failure to follow up patients with sore throats after seeing them once; (4) insufficient doses of antitoxin especially in toxic cases; and (5) confusing diphtheria with other conditions. The danger of anaphalactic shock after diphtheria anti-toxin is so slight as compared with that of diphtheria that it should be ignored. Severe reactions are more apt to occur in patients subject to asthma or hay fever. The amount of antitoxin to use will depend on the age of the patient and the stage of the disease, ranging from 5,000 to 20,000 units or more. Laryngeal types and those seen late require larger doses than others. It is recommended that toxic cases be injected intravenously. It is preferable to give the entire dose at one time.

As an immunizing agent diphtheria antitoxin has been sadly disappointing, since the immunity developed lasts only about two weeks. This offers little help in controlling the spread of the disease among the people of any large city.

On account of the large number of healthy carriers of diphtheria bacilli it is impossible to control the spread of the

disease to any great extent by detecting and isolating them. Our most hopeful procedure seems to be in producing an active, permanent immunity to this infection in as large a number of people as possible.

By the Schick test we can determine which persons are naturally immune and which are subject to contracting the disease on exposure. This test shows that children between six months and four years of age are most susceptible, the ratio being 60 per cent. This proportion drops as they grow older, and develop a natural immunity, until in adult life it is only 12 per cent. The Schick test is performed by injecting 1.40 M. L. D. (for guinea pig) in 2 c.c. physiological saline sol. between the layers of skin on the forearm. Careful technic is essential. A positive reaction consists in the development of a circumscribed area of redness and slight skin infiltration 1 to 2 c. m. in diameter at the point of injection. It persists 7 to 14 days, leaving a superficial scaling and a persistent brownish pigmentation. This indicates a susceptibility to diphtheria. A negative reaction is one that shows no local inflammation or one which fades within three days, leaving no pigmentation. Pseudo reactions sometimes occur in older children and adults and are difficult to interpret unless adequate control methods are used for comparison.

Persons showing positive Schick tests can be rendered immune to diphtheria by injecting subcutaneously 1 c. c. of toxin-antitoxin mixture at weekly intervals for three doses. The local and constitutional reactions are usually absent in infants. Older children and adults exhibit in about 30 per cent of cases considerable local swelling and more or less definite constitutional disturbances, which may last 24 to 72 hours. No permanent injury results. The immunity usually begins to develop during the second month after the first injection and grows gradually stronger. Some cases do not become fully immune until the sixth month and some require

additional injections. This method has been used in New York City during the past five years in over 5,000 cases and the immunity has persisted in over 90 per cent of the first 100 treated. This toxin-antitoxin immunization is particularly applicable to use in institutions for children and for school children. Its universal adoption would go far towards removing the danger of the dreaded diphtheria from which more than 1,000 deaths occur annually in New York City alone.

Another measure which would aid in lowering the death rate from this disease would be the free and unlimited distribution of diphtheria antitoxin. South Carolina has done this for eleven years with reduction of mortality rate to one-third that of Georgia, and at a cost of about one cent per capita annually. The people of South Carolina have been saved many thousands of dollars, due to the fact that the state can secure antitoxin at about one-third the retail selling price.

In whooping cough we have a combined vaccine which seems of definite value both in preventing the development of the disease and in treatment after onset. It apparently lessens the severity of the paroxysms and shortens the course.

In measles Richardson and Connor, of Providence, report that they have been able to immunize children by injection of blood serum from convalescent patients, and also by simultaneous inoculation of both virus and immune serum. For the latter group swabs were made from noses and throats of active early measles cases and the fresh secretions rubbed over the mucous membranes of noses and throats of the patients on the same day immune serum was injected. This method has not been sufficiently worked out as yet, but it seems suggestive enough to warrant further investigation. Its greatest field of usefulness promises to be in institutions where children are congregated. Anderson, Goldberger, Blake, Trask, and others have worked with this problem, using a virus attenuated by passage

through monkeys and injected intra-cutaneously. The virus may also be attenuated by preservation in glycerol in the ice box. These experiments give promise when completed, of leading to valuable results.

In the control of the common contagious diseases much has been accomplished by isolation in the home and hospital, although this has not been as successful as hoped fifty years ago. It was thought that some diseases as scarlet fever might be stamped out. However, this has not been the case. It is difficult to show that isolation has had much, if any influence, in the cities on the incidence of such diseases as scarlet fever, diphtheria, measles and whooping cough, and less evidence in meningitis, infantile paralysis, pneumonia, and influenza. In rural communities it has been much more effective. Chapin believes that isolation in scarlet fever during many years has made the disease milder and that in smallpox it has diminished the prevalence to a great extent. The principle of isolation is correct and should be continued in home and hospital, and extended to include all cases uncovered by the employment of any tests to diagnose mild cases and carriers. Unfortunately the most infectious stage in these diseases is usually before the onset of diagnostic symptoms, so we can only hope to limit the spread rather than stop it. Where it is impossible to isolate carriers they should be kept under observation and control so as to prevent them so far as possible from infecting any large number of people.

Where the patient is treated at home it is necessary to isolate him from the rest of the family. All infecting material should be destroyed promptly, and all utensils used should be kept separate and sterilized before mixing with others. In all cases the other children in the family who have not an immunity to the disease should be kept from school and from association with others.

Our knowledge of the routes of escape of viruses from the body while not com-

plete is fairly definite even for many of those diseases the etiology of which is unknown. This knowledge has been gained through laboratory investigation and epidemiological experience. Richardson gives the usual methods of escape of infecting material of several diseases as follows:

Diphtheria: In the throat, nasal and aural secretions, and very rarely in secretions from wounds and from intestinal tract.

Scarlet Fever: in the nasal, and throat secretions and aural and nasal discharges (not from desquamation).

Measles: In the nasal and throat secretions.

Chicken Pox and Small Pox: In the nasal and throat secretions and from skin lesions.

The first problem is to collect and destroy these secretions promptly.

As to the duration of the infectious stage our knowledge is as yet incomplete. In measles, smallpox and typhus fever the viruses live for a very short time in the human body. In typhoid fever, cholera, diphtheria and scarlet fever the carrier state develops rather frequently.

A recent investigation seems to show that organisms promptly die or lose their virulence, particularly under conditions of drying and sunlight. When they find their way into very favorable media as milk or water, they may survive and even multiply. The stories of clothing infected with scarlet fever remaining so for years are unscientific and not advanced on sound reasoning. It is a fundamental principle, in support of which there is increasing evidence, that it is the infected human being and not infected things about us which is the chief source of disease.

Quarantine periods vary somewhat in different locations. In scarlet fever five weeks after onset seems the usual time, except in those cases complicated by otitis media. These are held until the discharge ceases.

Diphtheria cases should be held until

three successive negative cultures are obtained.

Chicken pox and small pox should be isolated until the scabs fall off.

Whooping cough is said by some authorities not to be contagious two weeks after onset, others maintain isolation until paroxysms and whoop cease. Some of these cases never "whoop" at any stage.

Measles cases may be dismissed three or four days after the rash fades, if there is no nasal discharge.

Our methods of controlling these infections should include: every available measure of proved worth to produce immunity in susceptible persons; the recognition and isolation of the active cases early; the proper disposal of infecting material; the isolation of non-immune contacts; the detection and isolation of carriers as far as possible, and the education of the public to realize the importance of co-operation in our efforts to stamp out these diseases.

DISCUSSION OF "ANTITOXIN AND INTUBATION IN DIPHTHERIA," BY DR. ADKINS, AND "CONTROL OF THE COMMON CONTAGIOUS DISEASES," BY DR. WOOD.

Dr. T. F. Abererombie, Secretary State Board of Health, Atlanta:

I want to discuss these papers from the public health standpoint. I am glad that Dr. Adkins mentioned the dosage of antitoxin to be given. Just a few days ago a physician in this state gave a child over three hundred thousand units of antitoxin. If he had saved the life of the child, no one would regret it, but the child died. He would call me up every night and order ten or twelve packages of ten thousand units, and when I would remonstrate with him he said he wanted it all for one patient.

The death rate from diphtheria is still too high. We all know the high mortality rate in 1894, when diphtheria antitoxin was first discovered and used by physicians. It came down steadily until about ten years ago, but since then it has remained practically stationary. To my mind, that shows that we will have to get some other remedy besides antitoxin to eliminate diphtheria. Dr. Wood has brought out the technique of giving the toxin-antitoxin, and that I will not stress. Dr. Adkins made the point that the age of greatest susceptibility is the pre-school age, and so if health officers immunize the school children, they will not reduce the mortality nor reduce the incidence as ought to be done, because they will not reach the pre-school age. If the private practitioners would Schick and immunize the children in their practice under four or five years of age, we could hope for a reduction in the mortality from diphtheria.

The State Board of Health will furnish the Schick test free to any one in the state. We have not the money to furnish the toxin-antitoxin, but if the physicians will Schick all their patients and the parents know the children are susceptible, they will have them immunized. We have made arrangements, through the same house that we get the toxin-antitoxin at a reduced rate, if you want to take advantage of that opportunity.

Dr. Bocker, State Board of Health, Atlanta:

Just a word about the things we have been talking about all afternoon; that is, breast feeding and complementary feeding. We discussed these very learnedly and scientifically, and decided the question right here. But we do not touch it unless we touch the educational side. Unless we learn how to convince the particular mother that complementary feeding is the proper thing, and unless we can convince the teachers and other adults that have to do

with the children, we do not get anywhere. You will find that the people in your community who are most interested in any health work you do are the women. The organized women in the communities are the people who are going to help you. So I advise you, whether it is a proposition of immunization, complementary feeding, or disinfecting or not disinfecting, get after the women and they will help you. Remember that your influence is never as great as it should be unless you get the women with you, whether it is the individual mother, the mother of the child or the person, who is taking care of your patient, or a group of women. Unless you get the women, some one else will get them. We hear of osteopaths, chiropractors, and all the rest, and it is every bit your fault. The women can just as well be influenced by you.

Dr. J. C. Logan:

I plead guilty to being the physician to whom Dr. Abererombie referred, who used over three hundred thousand units of antitoxin in one case, and I have no regrets in pushing the remedy to that extent. Had my little patient died without my having used it, I would have some regrets. Although the quantity I used was unusually large, there is a case on record in Tyson's practice in which 495,000 units were used. This was a relapsing case that extended from about August 22nd to some time in October. My little patient was a case in which I was called in consultation with my father. The child was taken suddenly ill, Saturday, March 18, with very high temperature. There was no membrane in the throat at all. On Sunday, March 19, he discovered a small spot of membrane on the tonsil, when I was called and gave 10,000 units of antitoxin. On Monday, when I saw the patient, I found that it was the nasopharyngeal form, a most malignant type, and I began to push the antitoxin. The child lived ten days, and during that period I used 320,000 units of antitoxin. If I made any mistake in the treatment of that case, I believe it was that I let up on the antitoxin one day, March 27, when the child seemed much improved and I gave only 10,000 units. I was called in the next morning at 5 o'clock and found the membrane spreading again, so I began to push the antitoxin again. On the morning of the day of his death he showed an endocarditis, and died that afternoon. One interesting thing about this patient was that on five previous occasions he had had diphtheria and had been given antitoxin. Whether the fact that he had been sensitized previously with antitoxin had anything to do with the fact that we got so little result from the antitoxin, I do not know. I have learned, as have other physicians, to look upon antitoxin as a specific for diphtheria, and this death, I am proud to say, was not due to lack of pushing the specific; and in the future when I am called to a patient with diphtheria who has had it before and has been sensitized with antitoxin, my minimum initial dose will be 20,000 units.

Dr. W. A. Mulherin, Augusta:

I think the essayists have brought out some very interesting points, and I merely wish to stress a few of them.

As regards success attending the administration of antitoxin in diphtheria, two points should be emphasized. The most important point is the time when antitoxin is given. When we consider the fact that toxins are circulating in the blood stream, and do damage to heart, kidneys and nerves, it becomes quite apparent that the sooner they are neutralized with antitoxin the less damage will be done. Also the fact that when damage has been done, antitoxin does not possess power to undo this damage. Therefore, antitoxin should be given at the earliest time possible in cases of diphtheria.

The second point is to give enough antitoxin to neutralize the toxins already generated. Personally, I feel that 10,000 units given early will take care of the average case of diphtheria—excepting laryngeal and naso-pharyngeal cases.

The report of the Health Department of Chicago, covering a series of years, is quite illuminating. This report shows cases of diphtheria receiving antitoxin on the first day have a mortality of .27; the second day 1.67; the third day 3.77; the fourth day 11.39, and after the fourth day mortality goes up to 25.37.

I heartily concur with Dr. Adkins in his advice to give a large single dose of antitoxin. It is generally conceded today that if a physician has to give a second dose of antitoxin, it is an acknowledgment that his judgment, as regards the proper dosage of antitoxin, was in error. When we consider that antitoxin when given subcutaneously, or intra-muscularly, takes time to be absorbed, sometimes one to three days, we can readily see how we are losing time by giving repeated doses extending over one to three days. Another point I think worthy of stressing is, when in doubt about a patient having diphtheria, give antitoxin. Do not let the child take the chance, for it may cost the patient its life. It not infrequently happens that the laboratory reports a negative culture, because in smearing the throat no diphtheria germs were produced. The clinical picture is more important than laboratory findings.

As regards Schick test, it is a scientific test, but I believe we are playing this test a little too strongly. Its value is more an economic one rather than a true medical necessity, except in re-checking in six months time, after the administration of toxin-antitoxin, to determine if the patient possesses immunity against diphtheria. I am quite

convinced that it is unnecessary to apply Schick test under the age of six or seven years.

If I understand the principle on which the administration of toxin-antitoxin is based, the toxin when injected into the tissues causes anti-bodies to be formed in the body. A definite amount of antitoxin is combined with the toxin in order to neutralize the dangerous possibilities of the toxin. If the patient already possesses these antibodies (antitoxin) he is doubly protected, and the toxin-antitoxin can do no harm. With the general practitioner uncertain about technique, and with doubtful interpretations of the normal and pseudo reactions, we are justified under such circumstances in administering toxin-antitoxin without a Schick test.

About anaphylaxis following the administration of diphtheria antitoxin, it is well to remember that with the millions of doses of antitoxin that have been given to babies and children, there have been only a few cases of anaphylaxis that have resulted. Almost invariably these cases of anaphylactic reactions occur in adults who have had a previous history of asthma. Therefore there should be no fear in administering antitoxin to babies and children.

Concerning control of communicable diseases, I think we all realize that the air-borne theory has been exploded. Today the theory is contact and close proximity. The chief sources of infection, I believe, are unrecognized cases and carriers.

I had the pleasure last year of speaking with Dr. Richardson, of Providence, R. I., about his theory of infection. He is the chief exponent of putting various infections in the same ward, separating them only by interposing a screen or cubicles between each patient. He maintains if medical cleanliness, the same as surgeons observe surgical cleanliness, is carried out, there will be no cross infection to arise in these cases. By this he means if the patient is touched, or the patient's bed, the gown must be changed, and the hands washed before seeing the next patient.

Dr. W. L. Funkhouser:

The dose of antitoxin, of course, depends upon the individual case, but I think we must not make the mistake of giving too small a dose, or too late. A small dose administered early is worth more than a large one administered late. The avenue of injection has a great deal to do with results. Personally, I use the intramuscular, and give twenty thousand units. The objection to the intravenous method is that so much of the antitoxin we get is cloudy, and we naturally feel a hesitancy in putting so much protein into the system. Again, the veins are so small and the syringe so difficult to handle that it is difficult to force the antitoxin in. Intramuscularly there is much less pain, and the antitoxin is absorbed more quickly.

With all of our knowledge we have not reduced the amount of diphtheria, nor the mortality. In New York, in 1917, there were 12,624 cases, with 1,158 deaths. In 1920 there were 14,160 cases and 1,045 deaths. In Georgia, in 1919, there were 241 deaths; in 1920, 402 deaths; in 1921, 404 deaths—this in spite of the fact that in 1921 half again as much money was spent by the State Board of Health for antitoxin. So it seems that we must try some preventive measures to reduce our mortality. Dr. Davis, of the Bureau of Vital Statistics, has prepared a very interesting chart which gives the mortality in the registration area from diphtheria, smallpox and scarlet fever. The diphtheria rate from 1915 to 1921 is practically level.

I believe the future control of diphtheria depends upon the use of toxin-antitoxin. Park and Zingher have immunized 52,000 children in New York (in 1921), and in the latter part of that year there was noticeable a decrease of both clinical cases and deaths. Mayer, of Chicago, found that 94 per cent of all whom he immunized showed a negative Schick on re-testing. The number of my private cases is small, of course, but the results may be interesting: 92 per cent were positive in children of all ages, the youngest being about eight months. On re-testing the positives were 16 per cent, showing that a number had developed immunity.

Dr. A. J. Waring, Savannah.

I was very glad that Dr. Adkins, in his valuable paper, spoke of the necessity sometimes of early tracheotomy. Possibly more men in the medical profession could make a good stab at a tracheotomy than an intubation. In my own community, Savannah, there are probably only three men who can do an intubation, and I think that in Athens there is only one man who can do one.

You all know of children who have impacted the larynx with some foreign body, and men have gone ahead and done a tracheotomy and the children have lived. It is sometimes a question of rather serious judgment whether we shall do a tracheotomy when the men who are able to do an intubation are not very numerous and not easy to get hold of if the child loses the tube.

Another thing we should consider along with diphtheria is nasal diphtheria, which often goes by the board. If there is an exorinating, unilateral nasal discharge, we know it is due either to nasal diphtheria or to some foreign substance. I used not to think so much of nasal diphtheria, but recently I had three cases, two infected by the other child. We must impress the mothers with the fact that a unilateral nasal discharge of that type usually means some trouble when it is associated with some definite obstruction.

Of course, we are all impressed with what is being done

with toxin-antitoxin. The State Board of Health is trying to do something along that line, and I think it is due the laity of the State that we get behind the Board. It seems such a pity that so much has been done up North and so little down South. There is Sidbury, in Wilmington, who three years ago played the part of a little czar, got the board of health back of him, and Schicked the whole town. The same performance can be duplicated in other southern communities, and ought to be duplicated.

In the control of contagious diseases there are two things we should emphasize. The first is to back the boards of health, municipal, county, state and federal. The statute books are cumbered with health laws. If we had fewer laws, but definite ones, and they were enforced, we could do something. The other thing is the possibility of early diagnosis. In ninety per cent of the cases, for example, the child with the streptococcal throat has scarlet fever.

Dr. B. Bashinski, Macon:

There is one point which has not been brought out in the management of diphtheria, and which is most important, and that is the question of rest. I am sure that we have a number of cases that die due to the myocardial changes, on account of letting the patient get up in too short a time. A patient with diphtheria, no matter how mild, should be kept in bed and not allowed to get up for anything for at least ten days or two weeks as a minimum. Absolute rest will certainly help us to keep from having so many bad hearts and so many sudden deaths after diphtheria.

In laryngeal diphtheria, in the great majority of cases, it is very rare to see the temperature over 99 degrees, whereas the tonsil type will give you a very high temperature. That is why so many cases of laryngeal diphtheria have been diagnosed as simple croup, because of the low temperature.

Another point brought out is the serum sickness, sometimes mis-called anaphylaxis. It is usually wise to tell the mother about the probability of serum sickness, which may appear as a rule, any time within two or three weeks after the injection of antitoxin. At the time you inject the antitoxin tell the mother about this serum sickness, and how easy it is to treat. As you know, all that is needed is a good soda bath.

As to the length of time to quarantine scarlet fever, I think four weeks is the limit. In fact, in some localities they classify scarlet fever as no longer contagious after the temperature disappears.

Dr. M. A. Clark, Macon:

One thing that helps me is never to be in too much of a hurry to look at the throat of a feverish child whom I am called to see.

We can set the example in preventive medicine. A number of years ago, before linen was so high, I had a number of robes made, coming up over my head and down to my feet, and I made it a habit, before going in to see a patient with a contagious disease, to put on that robe. After seeing the patient, wash the hands thoroughly. Doctors often go into a contagious disease and tell the mothers how important it is to be careful, and yet they go in day after day with the same suit on that they wear when calling upon their other patients.

I hope that some day it will be proved that these diseases are not contagious after a certain length of time, but until then I shall continue to insist upon my parents being careful and shall wear my robes and insist upon thorough cleanliness. Sometimes, to satisfy the mother and encourage her to clean up thoroughly, I let her burn formaldehyde in the room, because it gets her to clean up thoroughly. By using these methods, I am proud to report that I have not had second cases in my practice.

With reference to antitoxin, if I had to vote on it, I would vote to make ten thousand units the minimum dose. Of course, I want to indorse what has been said about the early use of it. In the laryngeal cases we should give larger doses. I do not give it intravenously. You will pardon me if I say that I think we are getting a little reckless in playing with the veins of our patients. We should go a little more slowly. If we recognize our cases of diphtheria earlier, the intramuscular injections will be effective.

Dr. Curtis:

I notice that Dr. Abercrombie states that there has been very little reduction in the diphtheria mortality in ten years. For ten years the average physician has recognized the importance and necessity of using antitoxin, but they have not gotten into the habit of using it early. I think I can name counties in this State where you can not find the antitoxin, right now. If you have to order it by mail it is a little late to use it. Then, on the other hand, people are prone to neglect the symptoms of sickness, and it may run along for four or five days before they call in a physician at all. Then you are handicapped.

I wish to stress what has been said about the early use of antitoxin. My experience is that it does not take such enormous doses if you give it early. I am in the habit of carrying a package of antitoxin and test tubes all the time. If I find a case that looks like diphtheria, I do not wait, but give the antitoxin at once. Then I mop out the throat and have a culture made. If the child has not diphtheria, giving the antitoxin has done no harm. The first day I see the membrane appear, I give five thousand units; the

second day ten thousand units, and the third day twenty thousand units. If you give one dose in the beginning of the disease, even if not a large dose, the people will sometimes doubt the children's having diphtheria, they get well so quickly.

Dr. L. C. Allen, Hoschton:

I would hesitate to give a child of mine three hundred thousand units of diphtheria antitoxin. My experience has been that if you give ten to twenty thousand units on the first day or second day of the disease, you will not have to repeat the dose. If you wait until the fourth, fifth or sixth day, the antitoxin will not do much good, anyway. At that stage of the game, after the child is profoundly toxic, and the heart, lungs and kidneys are being taxed, what the child needs is not three hundred thousand units of antitoxin put into its system to burden the excretory organs, but rest, stimulation and proper food. Diphtheria antitoxin is a specific if given in the early stage of the disease, the earlier the better, but in the later stages it does not do much good, however much you give. I think it might be a determining factor in bringing about the death of a child, if given late.

As to rest, I think that cannot be stressed too much. I had a very sad experience with a little girl, twelve years old, who had diphtheria, got along very nicely, and recovered. At the end of two weeks the mother sent for me one day to come quickly, and before I got there—about two blocks—the girl was dead. She had been dismissed two weeks. I had another case, a little boy about four or five years old, badly spoiled, who could not be kept quiet in bed or anywhere else. They nursed him and cared for him as best they could, but after he became convalescent he died one night in very short order. So I think the question of rest is of extreme importance, and that it should be enforced in every case.

Dr. G. L. Alexander, Forsyth:

I have been listening with quite a good deal of interest to this discussion about antitoxin. We who practice in rural communities are placed in positions very often where we have to do just the best we can, and very often we are at our wit's end and God Almighty has to help us. I want to cite three instances.

Several years ago I was called in the country, about twelve miles from town, in consultation, to see a little boy of twelve, who had diphtheria. He was cyanotic. I was told over the telephone to bring an intubation set and some antitoxin. I had never attempted an intubation before, but I went ahead and intubated the child and gave ten thousand units of antitoxin. A few hours later I gave five thousand more. The child retained the tube without difficulty and recovered.

As regards the intravenous use of antitoxin, I have attempted it only once. I was called to a child who was said to have croup. When I reached the house it was cyanotic. It never had temperature. I telephoned to town to a brother physician to bring some antitoxin. When he got out we decided to try the intravenous method, because the child's condition was so desperate. We gave three thousand units intravenously. I said that we had better stick around, for we had heard of anaphylaxis. After a few minutes the grandmother called us and said the child was going to die. It was stretched out perfectly rigid, and was so hot that it burned the hand to touch it, almost. I was having a convulsion. I happened to have a little bottle of chloroform and administered a few whiffs and it relaxed. I took the temperature by rectum and it was 106. I told the other physician I would stay around until night, as I did not want to leave the child, and he went on back to town. I took the child's temperature every hour, and it went down a degree every hour.

With the intravenous administration of antitoxin you may sometimes have anaphylaxis.

Having had that experience with anaphylaxis, not long ago I had a case brought to the office, a child which had been sick for four days with croup. I gave it ten thousand units immediately, followed in twelve hours with five thousand more. After eight hours it seemed no better, so I gave five thousand more. In about eight hours after that it was dead. Would have given antitoxin in this case intravenously if I had not previously had an anaphylactic shock in case above referred to.

Dr. W. E. McCurry, Hartwell:

In the handling of cases of diphtheria with antitoxin, successful management depends upon the proper correlation of the dosage and the method of administration. In the work of Doctors Schick and Kassowitz, of Vienna, using the intracutaneous test as a guide, they found in using the subcutaneous method that it was three to four days before they could obtain the maximum effect from the antitoxin. With the intramuscular method they obtained the maximum effect in from twenty-four to twenty-six hours. Of course, intravenously, the effect is obtained within a few hours.

Everybody advocates a large dose of antitoxin and giving it at once, I suppose. Personally, I never give less than ten thousand, and very frequently give twenty thousand units. I rarely give subsequent doses, and I feel that they are useless when I do give them.

During the past year I have been giving antitoxin intravenously to all seriously ill children. I have not had a

great many cases, but have seen no ill effects, and see no reason for anticipating difficulty in giving it. The veins can usually be found without trouble, and by taking a little time to soothe the little patients you can give it without any great difficulty. The results in these cases are so good that I feel well satisfied with my use of it.

Dr. S. A. Visanska, Atlanta:

I am one of those practitioners who started out about the same time that antitoxin was brought into Georgia, and to tell you the truth, if I went by my experience I would not use the large doses that we advocate today. I do not want you to think that I am opposed to the large doses. I started out practicing some years ago, and had to use antitoxin in what we might call an impure state. We did not then use very large doses. I had a great many cases referred to me because many doctors did not care to use it or did not know how to use it. My experience has been that you have to see the case and then judge from the case, from its malignancy, how many units you should give. I remember the time when I would give only five thousand units and get a good result. Still, if I had given twenty thousand units, I would have thought it was due to the large dose. We are perhaps having a more or less malignant type of diphtheria now. I have been called in some cases on the fifth or sixth day and have given antitoxin and gotten good results.

The point that we should not overlook is that antitoxin does only one certain thing—that is, it neutralizes the toxin of diphtheria. But there is not only the toxin of diphtheria present, but other toxins. There is the streptococcus; also the staphylococcus, which does as much harm. The same thing is true with influenza. Influenza alone never kills any one—but its complications will. We have to stimulate, and watch the kidneys. Feed the patient, and give him rest.

From the day I started using the first dose of antitoxin my results have been practically one hundred per cent cures. Therefore, if from the time I started using the preparation until today I have gotten one hundred per cent cures with ten thousand units, there is no reason why I should increase the dose to fifty thousand. You may say that I had mild cases, but you know that I could not select the cases I was called to see, nor the cases referred to me.

Dr. L. O. Mauldin, Greenville, S. C.:

About giving the antitoxin, I always like to give a large initial dose, depending upon the age of the patient and the severity of the toxemia—a dose of from ten to twenty thousand units. I always like, also, to try out the patient before I give antitoxin to see if he has an anaphylactic reaction, and the way I do that is to give about three drops of the antitoxin hypodermically and wait for about twenty or thirty minutes to see if he gets any reaction from that. If he does not, I am not afraid to go on and give as big a dose as may seem necessary.

Another thing about anaphylaxis is that I have never seen a case of it, but I have always been taught to carry along with me some adrenalin chloride solution.

As to intubation, it has been my duty on several occasions to intubate, and my experience in intubation is that I can always do better and feel that I am using the safer method for the patient when the patient is lying down. Have the patient in the recumbent position.

Dr. Roberts, Augusta:

I would like to say just a word about intravenous antitoxin, which seems not to be in very good repute around here. For the last two years I have been studying in Philadelphia and Boston, and had work in the contagious hospitals there. It seems to me that it is absolutely necessary to give the antitoxin intravenously in laryngeal cases, and it would prevent what Dr. Adkins spoke of—early intubation. We have been taught that intubation is not necessary if we give the antitoxin intravenously. We had a few clinic tube cases—some ten years old who had the tubes put in at six, and were still using the tubes at ten years. It seems that intravenous antitoxin is certainly indicated in all laryngeal cases, and I think also in severe tonsil and faucial cases.

Dr. C. P. Ward.

These discussions lead us up to the point where we use antitoxin and fail to get results. Suppose we lose our patients? There must be a cause. In my practice I have used the small doses.

I was convinced early in my life of the efficacy of iodine in all infectious diseases, hence I have used it in these infectious conditions, especially in diphtheria and influenza. If we use iodine locally and internally in diphtheria I believe that we shall help our patients. I depend upon it internally more than locally. Dr. Kyme read a paper, I suppose sixteen years ago, stating that he could relieve 50 per cent of the cases of diphtheria by the use of Lugol's solution of iodine. About that time I began using it, and my statistics would show only one case of mortality, and the cause has been referred to in not keeping the patient quiet. I do not believe that I would have lost that child except that it died from an acute heart from getting out of bed and walking to the front door.

I have never given the large doses of antitoxin. I gave it to my first case I think in November, 1896. The child

was strangling and looked as if it would die any minute. I gave five thousand units, and within eight hours the child was breathing all right.

Early in the use of antitoxin you could hardly get people to buy it. I have numbers of times bought it and told them that I would be responsible for it when I would not wait for a culture.

Dr. Wood, closing the discussion:

Dr. Mulherin is right, I believe, in his statement that the children in New York below school age are not Schicked, but given the toxin-antitoxin. There are so many not immune that they do not think it necessary to give the Schick test, but immunize all.

As to intubation, there is a new method being used now which seems to give promise of some help, and that is to put in the tube, leave it for about five minutes, and take it out again. The introduction of the tube will dislodge the membrane causing the obstruction, and after that is removed the case will get along very well. The important thing is to stay by the case and watch it, which should be done anyway if the tube is put in.

In 1912 I worked in the Providence Hospital under —. He does not make any attempt to mix up these cases in one ward. He has one building for measles, one for scarlet fever, and another where everything is treated. They use the barrier system, where they put beds twelve feet apart without fear of contagion, they say. They also use the cubicle system. The case is put in a private room first, for a week or so, and then moved out into the ward.

I believe that fumigation creates a false sense of security. If people get the idea that fumigation is going to do the work, they will not wash the floors and the walls, but will fumigate, because it is easier.

As a matter of fact, the amount of antitoxin necessary to immunize all the toxin in a diphtheria case would be about 500 units, if you could get it in one location. The reason we have to use so much more is because it is distributed by the blood. But in most cases I think that it will be found sufficient to use twenty thousand units.

Dr. Adkins, closing the discussion:

Discussion has been most generous and time will not permit taking up every point brought out in detail.

I agree with what Dr. Wood said in his paper. In regard to fumigation, as it is now carried out under various health departments, I do not think it is of any practical value, principally because it is impossible to make any room or number of rooms air-tight and unless such is the case and the formaldehyde gas put under pressure it is not efficacious from a standpoint of fumigation. However, it is probably wise to continue it for its general effect, psychological, at least, upon the public. It would prove more efficacious to see that the room or rooms are thoroughly cleansed and aired a sufficient length of time after the fumigation as the organisms rapidly lose their virulence upon exposure to fresh air and sunshine.

With the free distribution of antitoxin there is little or no excuse for it not being available for the great majority of cases. It seems to me most any town in Georgia could make arrangements with the State Board of Health Department to carry at least a reasonable supply on hand at all times. The State of Georgia has been distributing free antitoxin for many years but it has been particularly valuable since they gave up manufacturing it and begun to use the product of Lederle. The amount stocked by the druggist for selling is not an expensive item to him as after the date of expiration as stamped on the package, the manufacturer will take it back and return fresh antitoxin.

Each of us is entitled to his opinion, of course, and mine is that the intravenous use of antitoxin is not only equally as harmless as any other intravenous medication, but I believe by far the most efficacious. Of course, now and then you will get a bad result which you might see fit to blame on the antitoxin. I am satisfied personally that I have never seen a case of true anaphylaxis from its use, although I have seen many reactions, but none of them in any degree of severity and I have given a great deal of antitoxin intravenously. You may look for a chill within twenty or thirty minutes after its administration intravenously and probably an urticaria some few days later, neither of which does any harm. A small dose of adrenalin will usually prevent the chill, and when an urticaria appears, if given along with other general measures, will soon correct that condition. The progress of diphtheria is rapid and the giving of antitoxin is to neutralize the toxin and the quicker the antitoxin gets into the blood stream the more quickly it will act. If you have a fresh and reliable product there are no contradictions from using it intravenously. It is a wise procedure, however, to transfer it under aseptic precautions to a Luer syringe as the syringe the manufacturer furnishes with the rubber pistons are absolutely abominable.

Antitoxin will not materially repair damage already done by the disease but you still have the disease to treat and should therefore give antitoxin regardless.

Regarding intubation—to all appearances it is extremely simple but is unquestionably one of the hardest operations to perform properly and successfully continuously. When intubation is necessary it is necessary right then and there and every attempt that is unsuccessful makes matters worse, as the spasmodic element on the part of the patient in-

creases the stenosis considerably. Strictly speaking, intubation is but high-class mechanics after all. One of the best intubators I ever saw was a former head nurse at the Willard Parker hospital in New York. For one to do an intubation properly, dexterity and skill in the use of one's hand is not only essential but this must be backed up by a thorough practice and strength.

THE IMPORTANCE OF A STATE PEDI- ATRIC SOCIETY AS A COMPONENT PART OF STATE MEDICAL ASSOCIATION.*

W. A. Mulherin, A. M., M. D.,

Associate Professor of Pediatrics, University of Georgia; Pediatrician to Children's Hospital, Augusta, Georgia.

It is my belief the members of the Medical Association of Georgia do not fully appreciate the true value of the Georgia Pediatric Society, as a component part of our State Medical Association. If the Medical Association of Georgia intends to measure up to its obligations to the baby and child, then the Georgia Pediatric Society is not only of decided importance, but is an absolute necessity in the proper function of our State Medical Association.

In order to substantiate my position, permit me to recall a few well recognized facts. Proper consideration of these facts, I believe, will help to make clear my viewpoint.

Facts.

1. The ideal in medicine today is preventive practice. The most important and fertile field in preventive medicine is found in Pediatrics. Pediatric practice might be likened to the building of a skyscraper, or a substantial home. The foundation is the most important part of the structure. Pediatrics, rightly or wrongly, builds the foundation for the future adult. Theodore Roosevelt realized the importance of pediatric work when, in one of his address he remarked: "The future of any nation depends upon the moulding of the minds and bodies of the younger generation."

2. Today the public is rightly asking of the medical profession more consideration and attention to babies and children. The Federation of Women's Clubs, the League

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of Women Voters, the Parent-Teachers' Associations, and other kindred associations and societies with baby welfare features in their work, are fast moulding public opinion to demand the rights of babies and children. These associations and societies are well within their rights. The medical profession is the one to whom they chiefly look for help in the accomplishment of their ideals.

3. More babies and children are treated by general practitioners than pediatricians—due to general practitioners' relatively greater number. A fair estimate of the general practitioner's pediatric practice might be reckoned as one-fourth to one-third of his general practice. By pediatric practice I include ages from birth to 14 years. As a matter of equity should not one-fourth to one-third of the general practitioner's time and study be given to pediatrics? I think it reasonable to state this amount of time is not given. Is this fair to the physicians themselves, the babies and children, and parents of the little ones?

4. The chief contributing factors in increasing, and causing to be continued, our high general mortality and morbidity rates, are infant mortality and morbidity. The weakest link in our medical chain has been, and is today, infant mortality and morbidity. It is recognized by every physician that the medical profession is obligated to direct its best efforts to reduce infant mortality and morbidity.

The medical profession (morally if not legally) is represented by "organized medicines." Organized medicine is vested with medical rights, and by the same authority with medical responsibilities. Our State Medical Associations stand for the best organized, as well as the most representative, medicine in each State. Reduction of high infant mortality and morbidity in each State, therefore, is the responsibility of the respective State Medical Associations.

5. During the recent World War, when some 50,000 of our American soldiers were killed in combat, our State Medical Associations commendably exerted themselves to the limit, to help the cause. We felt not

only grieved, but our feelings were outraged by their deaths. Many of our physicians creditably volunteered for service, also we gave money until it hurt. Why such present apathy on the part of State Medical Associations, and the medical profession as a whole, when we know that yearly in America more than 200,000 babies die, chiefly from preventable troubles? This enormous waste of human life is preventable, yet the medical profession is not shocked, grieved, or its feelings outraged. These deaths are accepted as a matter of fact, and very little concern given them.

The psychology of such inconsistency is hard to understand. Probably it is because babies' deaths are less spectacular, also these deaths occur mainly in financially poor families. This is no excuse for inactivity and indifference. The spirit of our noble profession and its high ideals, entitle the poor, as well as the wealthy, to call not in vain to us for help.

6. The rights of babies and children to life are even more demanding and exacting on the medical profession than are those of adults. The baby is the most helpless animate thing sent into this world. If left to itself, unassisted, it will die. I believe the good Lord, in His infinite wisdom purposely ordained it so, in order to stimulate a few of our noblest feelings, such as love, help and proper consideration for babies. Also help us triumph over our selfishness and indifference.

It is well to remember, every baby born into this world has three inherent rights—a right to life, health and to happiness. Again it should not be forgotten that every right carries with it a corresponding responsibility on the part of someone to grant those rights.

Responsibility.

The responsibility of rendering unto babies and children rights and privileges to which they are justly entitled, rests primarily with State Medical Associations. As already mentioned, State Medical Associations stand for the most representative medicine in each State. Such repre-

sentation entitles it to be designated as the medical profession of the State. It is therefore their responsibility to see that all agencies working in the interest, and for the welfare, of babies and children function at the highest point of efficiency. Next in responsibility comes the State Pediatric Society, as a component part of the State Medical Association; then the State Board of Health, through its Division of Child Hygiene.

Pediatricians, electing pediatrics as their special line in medical practice, might be said to have assumed special obligations to infants and children. In addition, it might be argued that pediatricians in organizing State Pediatric Societies have taken unto themselves added responsibilities. This is quite true, but special obligations and added responsibilities do not mean sole responsibilities.

The State Pediatric Society is only a component part of the State Medical Association. As such it is not entitled, or is it permitted, to usurp the rights and privileges of the parent organization—the State Medical Association. For the same reason it cannot take to itself responsibilities “in toto” belonging to the parent organization.

The State Pediatric Society was purposely organized to look after this phase of work for the State Medical Association. It is especially desirous of accepting as much responsibility, in its field of endeavors, as the parent organization will delegate to it. In its commendable desires, it does seem fair that it should receive due recognition from State Medical Associations, for its real and genuine value to the parent organization. In consequence it should be accorded the hearty endorsement and active support of every member of the State Medical Association.

State Pediatric Societies.

Let it be said to the credit of southern Pediatricians, they were the first to conceive the idea, and put into effective operation, the organization of State Pediatric Societies. They believed such organizations, based on broad-gauged and sensible

ideas, were necessary in successfully handling this very important medical problem, baby and child welfare. Organization of State Pediatric Societies began in 1919, at Asheville meeting of the Pediatric Section of Southern Medical Association. The ideas responsible for the creation of State Pediatric Societies were about as follows: (1) Infant morbidity and mortality are unnecessarily high—no credit to the medical profession. (2) Babies and children can be made to grow stronger and healthier if more study and attention are given to them by the medical profession. (3) The entire southern medical profession's interest and support can be secured by organizing a State Pediatric Society in each southern state, with eligibility to membership open to all members of State Medical Association. (4) The object of this organization, to properly fulfill its purpose, must be to give first consideration to securing for babies and children their three inherent rights—right to life, health and happiness.

Accordingly, State Pediatric Societies were organized with the word “Pediatric,” in name “State Pediatric Society,” to signify the nature of work of society, and not its personnel. They were, therefore, organized not along selfish lines, for personal advancement and improvement of pediatricians, but primarily and mainly for the welfare of babies and children of the State. Already ten southern states have State Pediatric Societies as component parts of their medical associations. They are mentioned in order of priority: Georgia, Mississippi, Florida, Kentucky, North Carolina, South Carolina, Missouri, Tennessee, Texas and Virginia.

In the Constitution and By-laws of the Georgia Pediatric Society, eligibility to membership reads: “Any physician in good standing in the Medical Association of Georgia, and who is interested in Pediatrics, shall be eligible.” Is there a physician in the Medical Association of Georgia who is not interested in Pediatrics, not anxious to help in saving babies' and children's lives, and not willing to assist in making stronger and healthier children in the

State? Again, quoting from the Constitution and By-laws of the Georgia Pediatric Society, under Article II, stating purpose of society, the following is found: "The main objects of the Society are: 1st. Self-information in all matters pertaining to Pediatrics. 2nd. Passing on this information to the medical profession of the State so that they will become more interested in Pediatrics and help us to, 3rd. Educate the laity along lines which will lead to the prevention and lowering of infant morbidity and mortality."

1. Self-information in all matters pertaining to Pediatrics is accomplished by members, especially pediatrician members, keeping themselves well informed by study, reading leading pediatric journals, and attending recognized Pediatric Society meetings. Also by having pediatrician members give five minute talks on practical and timely pediatric subjects, at the yearly Pediatric Society smoker or banquet. These talks, followed by informal general discussions, serve as an excellent medium to keep all members of State Pediatric Society well informed.

2. Passing on this information to the medical profession of the State is carried out by the State Pediatric Society presenting before the general assembly meeting of the State Medical Association, on its yearly scientific program—not in pediatric section meetings—an authoritative pediatric paper on some timely subject. Also reading before the general assembly, in scientific session, several broad-gauged, non-technical pediatric papers; for the purpose of disseminating necessary pediatric knowledge, and to create general discussion from the general practitioners on these important subjects. In this way the general practitioner secures valuable pediatric information, with very little effort on his part. By such procedure it was believed the State Pediatric Society would grow in popularity, and eventually it would be made clear, to every member of the State Medical Association, that the State Pediatric Society was filling a distinct need in the State Medical Association.

3. Proper education of the laity, in order to reduce infant morbidity and mortality, is accomplished by co-operating in a mutual manner with the Division of Child Hygiene in State Board of Health. As the object of organization of the Division of Child Hygiene is the same as that of the State Pediatric Society, their efforts and work should be co-ordinated, and a close working basis established between the two. In Georgia the officers of our State Pediatric Society voluntarily serve on the Medical Advisory Board of the Division of Child Hygiene. In this way our State Pediatric Society helps in supervising necessary literature and instructions that go to the laity.

With such organization as a State Pediatric Society existing in any State, backed by the full support and activities of the State Medical Association, and the State Board of Health, babies and children of that State will receive their just deserts. It can then be truthfully stated that the medical profession of the State is responding to its full responsibilities as regards the rights of babies and children in that State.

Summary.

1. The most important and urgent medical problem confronting the medical profession today is to stop the unnecessary loss of life and illness amongst babies and children, also to rear healthier and stronger children.

2. The responsibility in each State rests primarily with the State Medical Association—as the representative and "organized medicine" of the State. Secondly, the State Pediatric Society is responsible as a component part of the State Medical Association. Thirdly, the State Board of Health, with fully 50 per cent of its activities given to preventive pediatrics, has a goodly share of responsibility.

3. By the combined and intelligent activities of the State Medical Association, State Pediatric Society, and State Board of Health, infant morbidity and mortality will be lowered in the State. Also a stronger and healthier race will be reared in the State.

4. The State Pediatric Society, representative of that part of the medical profession directing its best efforts to infant and child welfare, is of decided value and help to the State Medical Association. It is practically a necessity for the proper functioning of the State Medical Association.

5. The State Pediatric Society, owing to the importance and necessity of its work, is entitled to the solid support and sincere activities of every member of the State Medical Association.

TREATMENT OF CONGENITAL SYPHILIS IN CHILDREN.*

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The practitioner and pediatrician have paid little attention to the subject of syphilis in children up to a few years ago. Very little was taught to the medical students and as the result men went out in practice and knew little or nothing about this disease.

A little grey powder, a few mercurial inunctions and the patient was supposed to be cured. As a result of this constant laxity in treatment thousands of these children died and many more remained a burden upon their families or the State. In our own State Sanitarium at Milledgeville we find many patients suffering from neurosyphilis, who would not be there today had the patients been treated scientifically and with proper care. Text books, even in their latest editions fail to give a rational treatment for congenital lues. Some mention very casually that arsenicals may be given but are very vague in the ideas upon this subject.

In our clinic in Atlanta we have attempted to establish a thoroughly supervised prenatal treatment and also the care of the patient after birth. Prophylaxis is of the greatest importance. We know now that the nearer conception is to the infection of the mother the greater the danger of

interruption of pregnancy and as a result the chance of a living infant becomes lessened. For that reason it is advisable to take a Wassermann test on every prospective mother, to give her a careful examination and have a complete history in each case.

The prenatal clinics are at present being established all over the country and with the proper care and treatment of the mother even if her children do show luetic signs and symptoms these can be treated much quicker and benefit may be expected to be derived from this work in a much shorter period of time. Treatment can be of no value if the diagnosis is not improved on, as failure in early treatment results in prolonged care of the patient. A Wassermann test on the cord of the child immediately after birth will be of great value in our diagnosis, as statistics show that many mothers have a negative Wassermann while the blood from the cord gives a positive reaction.

The next point of importance in prophylaxis is a good history. Very few practitioners attempt to give a good portion of their time in taking a history. Many patients are seen at the age of ten and only then is a diagnosis of lues made. Certainly these patients with a careful history could have been diagnosed many years ago as luetic and no one can deny that the disease is more amenable to treatment in the first years of life.

The medical treatment as in adults is divided into the mercurial and arsenical treatments.

Mercury may be given (1) by mouth, (2) by rectum, (3) intramuscularly, (4) intravenously, (5) by inunction and (6) by vapor. We have found no difficulty in giving patients of any age mercury intramuscularly. This method has proved to be the best in our hands, as there are many objections to the other methods.

Mercury by mouth usually upsets digestion and young children, especially luetic, suffer greatly from digestive disturbances which are occasionally of a very grave nature. The rectal route is objectionable because suppositories usually do not stay in

* From the Syphilitic Department of the Pediatric Clinic Emory University Medical School. Preliminary report.

young children very long and as a result many times the placing of medication into the rectum results in defecation and a return of the mercury immediately after it is placed there. Inunctions practiced so much before the advent of Salvarsan are not used as much as they have been. The soiling of clothes and wearing apparel, the ignorance of the knowledge of proper massage should be considered when this method is advised. The best preparation is the blue ointment, ten grains per week to be massaged into different parts of the body daily. In the new born this method is probably the best. However, after the first few weeks of life other methods may be used to better advantage.

Mercury by inhalation has been brought up occasionally as the best method. This method requires no skill and no bad effects are to be expected as a result of it. Powdered mercurials are heated in a kettle and are inhaled. This we believe is about the poorest way of getting mercury into the system and certainly very little if any of the mercurial preparations may be expected to be absorbed. We certainly would under no circumstances recommend this procedure with the expectation of getting any kind of results.

This should be especially impressed upon the medical profession in view of the fact that many commercial houses have been lauding this method of treatment up to the sky. Mercurials intravenously in children will probably be completely opposed by those men who are not in favor of any kind of intravenous therapy in young children. While this method has not been given a trial in our clinic we believe that if properly carried out and if aseptic precautions are taken we see no reason why this method should not prove successful.

Our method and I believe so far the method of choice has been the intramuscular route. For very young children bichloridol has been found to be the best preparation, the dose is usually one-tenth of a grain. The collapsules in which this preparation is put up are easily melted and the contents injected into the gluteal region

which is the region of choice. The muscle is grabbed between the thumb and the middle finger with one hand and the needle is thrust deeply into the muscle tissue. A twenty-two needle about two and one-half inches long is the best to use. Occasionally the children wiggle about and the needle is apt to be broken off. Fordyce has suggested the use of a needle that would allow the child to turn about any way without a possibility of its being broken off. We have lately seen a modification of this needle and on the case used an accident occurred which caused us to believe that it is not any safer, than the ordinary one. If you put your thumb and forefinger near the tip of the barrel and hold on to the needle I doubt if the needle will ever break off. In over twelve hundred injections we have yet to see an accident occur. In children over one year of age mercury salicylate one-quarter of a grain for every forty pounds body weight is used.

Some men suggest the giving a course of arsenical treatment to be followed by mercury. Our policy has been to give mercury every other week, alternating the treatment with arsenical. If mercury is to be given by mouth, grey powder one-half to one grain three times a day, or bichloride of mercury one one-hundred-twentieth of a grain mixed with a little rhubarb and soda may be given. Potassium iodide two to five minims along with the other treatment is practical.

Before discussing the methods of injecting the arsenicals in young children it is best to discuss the value of the different preparations now used in the treatment of congenital lues.

As to a choice between arsphenamine, neoarsphenamine and silver arsphenamine I believe that I can truly say that very few men especially those who advocate the intramuscular route as the only proper one will advise the use of arsphenamine. Certainly intramuscularly this drug should under no circumstances be given to young children. The severe pain, the not uncommon sloughing of the tissues should serve as a warning to those men who attempt to

use it in this manner. As to the intravenous use of it I will say that we have not found it the best arsenical in our cases. Neoarsphenamine can be used in very small dilutions as compared to the arsphenamine. Some advise a concentration of as little as two c.c. of saline to one-tenth of a gram of the drug. Arsphenamine cannot be used in a dilution of less than thirty c.c. of saline to one-tenth of a gram of the drug.

The other advantages of neoarsphenamine over arsphenamine are as follows:

1. On account of its great solubility it may be used in much greater concentration and for that reason does not have to be given by the gravity method which would be quite difficult in young children.

2. Arsphenamine has to be alkalized and therefore is more liable to cause disturbances in the blood than the neoarsphenamine which is neutral.

3. The tolerance for neoarsphenamine in children is certainly remarkable. In over twelve hundred injections we have yet to see a reaction. In giving just one dose of arsphenamine we unfortunately had a severe reaction.

4. The therapeutic index for neoarsphenamine is very much greater than for the arsphenamine.

The silver arsphenamine is a new product, and has not been given enough trial to be given in congenital lues. It should not be used in children if for no other reason than that it presents at least all the objections that arsphenamine does, as stated above.

The Method of Treatment.

Our rule has been to alternate the injection of mercury with that of neoarsphenamine weekly. Mercury is given intra-year of age one-tenth of a grain of bichloridol is the dose preferred. Children above one year should receive mercury salicylate into the gluteal region every other week. We use one-quarter of a grain for children from one to six years of age and a half a grain from six to twelve years of age. By weight a quarter of a grain for every forty pounds. Hot towels should be applied to

the buttock for at least one hour as soon as patient gets home.

The neoarsphenamine is prepared by diluting one-tenth of a gram to every five c. c. freshly distilled water. The five c. c. of this dilution is given for every fifteen pounds of body weight. The initial dose is not any smaller than the doses to follow. Children under one year of age receive the injection intramuscularly in the buttock, the dose being divided into two equal parts and given at the same time in both hips. Hot towels are ordered to be applied for one to two hours after injection. In children over one year of age we find very little if any difficulty in getting into the veins. If the anatomy of the elbow is well understood and the general course of the veins known, there will certainly be no difficulty in finding the blood vessels, even if they cannot be seen with the naked eye. Once the solution is in the vein there is certainly nothing more to worry about. There is very little if any chance to see a reaction following these intravenous injections. The intramuscular injections cause quite a bit of indisposition on the part of the patient and I do not see why some men prefer to use this route exclusively unless they desire very slow absorption. Since we have not seen a single reaction following the solution of neoarsphenamine we do not see any reason why the intravenous route should not be the method of choice. There is no pain, no limping, the solution goes where it should immediately and there is no fear of reaction. Another method of injection of the drug through the fontanelle should be condemned as impractical and dangerous. One death in private practice will cause the most skilled man to abandon this dangerous route. Cases of neurosyphilis are treated in the same manner as it is the safest in children. The intraspinal method would be very difficult even if it were of great therapeutic value in young children and especially in infants. The instruments used are a luer syringe, ten to twenty c. c. and a twenty-two needle two inches long.

We must not forget that syphilis in young children brings about many organic disturbances which may or may not be traced directly to the luetic infection. Disturbances of nutrition, impairment of digestion, maldevelopment should be looked after and watched for, as otherwise the treatment will be of no value and in many cases may prove very harmful.

A constant gain in weight is absolutely essential and a hemoglobin examination should be made monthly. Should the hemoglobin get very low or a constant loss of weight discovered the patient must be immediately taken off the antiluetic treatment for at least two months. KI and iron tonics by mouth are then in order.

The Course of Treatment.

Our course consists of eight neoarsphenamine injections alternating with eight mercurial treatments. A provocative test is then given in 30 days. If positive, another full course is then given. If negative, the patient is given a three months' rest and another course is then followed. No more than two courses for the first year are to be allowed. The patient should have a Wassermann test done at least once a year and from time to time a supplemental history should be taken. A physical examination at least once a year is a good guide for the development of signs of the progress of the infection. If necessary one course of treatment may be given once a year and then followed by mercury and iodide by mouth. A lumbar puncture should be done after the first two courses of treatment and then at least once every three years.

The Length of Treatment.

How long should the congenital luetic be treated? The answer is, we do not know. Congenital lues is probably never cured completely but certainly it is necessary for us to attempt to do all in our power for these unfortunate little patients. Let me again repeat to you that a visit to the State Sanitarium at Milledgeville would convince most of us that many patients would be home today of value to their families and to their State were it

not for the fact that the subject has been so greatly neglected in the past. By careful and diligent treatment, by following up the literature of the present times and by the co-operation with the boards of health and clinics millions of dollars would be saved in our communities.

Summary.

1. Neoarsphenamine is the only agent of real value in congenital lues.

2. Intramuscular treatment of arsenicals may be given to children under one year of age. Older children should receive this treatment intravenously.

3. Mercury is given best by the intramuscular route with no bad end results.

4. A course of treatment consists of eight neoarsphenamine injections alternating with eight mercury treatments every other week.

5. Two courses should be given the first year of life.

6. The following courses should be governed by history and symptomatology.

7. A Wassermann should be made on every expectant mother, on every cord at birth of child, a careful examination of the placenta should be made and a complete history of the mother and child and also a careful physical examination as a routine.

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COMPLETE VERSUS SUB-TOTAL HYSTERECTOMY.*

A Review of 239 Hysterectomies performed for various pathological conditions.

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When some seven years ago, following a careful study of twenty-five patients upon whom supracervical hysterectomy had been performed for fibroid tumors of the uterus, it was observed that twenty of this series were suffering after a lapse of from one to three years, with pelvic discomfort, leukorrheal discharge, cervicitis, endocervicitis, dragging pain of bladder, or pain in back etc., necessitating removal

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

of the cervical stump which had been left undisturbed at the first operation, and that two had actually developed an epithelial cancer in the retained cervical stump, we began a routine of removing the uterus in its entirety if hysterectomy was performed at all.

In a series of 214 complete hysterectomies performed in the past six years, for various pathological conditions; carcinoma of cervix uteri, 8; fibroid tumors, 99; infected, lacerated, eroded, "pre-cancerous cervixes," 107; the results have been so far superior, both in end results, and the comfort of the patients, that we feel justified in reporting this series, and making a plea for complete removal of the uterus in preference to a supravaginal hysterectomy.

Polak, of Brooklyn, who favors the complete operation, mentions six advantages which are claimed by those who defend the sub-total procedure: First, The operation is more easily performed. Second, It can be done more rapidly and with less loss of blood. Third, It has lower morbidity. Fourth, It has lower mortality. Fifth, It does not shorten the vaginal walls. Sixth, By retaining the cervical stump, we have the keystone of the arch, thus maintaining the conformity of the vaginal vault, therefore, we are less likely to get prolapse of the vaginal walls.

In our experience none of these claims are substantiated. First, The operation, after having been performed a few times, becomes easy. If necessary, the sub-total operation can be done, and the cervical stump removed at once, as a separate procedure. Second, The technic later described, permits of a quick and practically bloodless operation. The completed operation rarely consumes more than forty-five minutes to one hour. Third, The morbidity in the sub-total is not lower, for in the complete, the comfort of the patient is immediate and permanent, and the recovery equally as prompt. Fourth, In this series of 214 operative patients there was a mortality of only 3, little more than 1 per cent, no more than in the sub-total opera-

tion. Fifth, The complete operation need not shorten the vaginal walls materially, unless much tissue is sacrificed because of carcinoma. Sixth, Instead of the cervix acting as an aid in being the "keystone of the arch," it is potentially a cancer, and invariably by becoming hypertrophied, and causing extension of infection into the lymphatic channels in the broad and uterosacral ligaments, produces pain, leukorrheal discharge, dragging down sensations on the urinary bladder, and general pelvic discomfort.

For many years my routine of using soda and dextrose liberally as a preliminary preparation for any surgical procedure has added greatly to the safety of every operation, and the post-operative comfort of every patient.

The following technic has been evolved in our clinic and is at present observed:

For four or five days preceding operation, where permissible, tampons of iodine, isarol and glycerine are used in the vagina, or, as has been suggested by Baggett, applications of 15 per cent silvol may be employed.

The patient is anesthetized; the cervix, cervical canal and vagina are rendered sterile by thorough iodination, a strip of sterile gauze is placed in the vagina posterior to the cervix extending through the vaginal outlet (this is removed the day following operation), and the patient catheterized if bladder has not already been recently emptied.

The Trendelenburg posture is gradually assumed, which allows the intestinal coils to gravitate into the upper portion of the abdomen with each expiration. The abdominal area is prepared with iodinated benzin (1-1000 sol.), then painted with iodine 3½ per cent, sterile sheet and towels are placed in position and novacain infiltration is employed.

The abdomen is then opened in the median line by an incision extending from the pubis to just below the umbilicus, or if necessary, extended around and above this point. The skin edges are covered with skin towels, the aponeurosis incised and

the edges immediately dissected from the muscles. This greatly facilitates the closure.

The muscles are separated and the peritoneum is opened first in the lower portion of the incision, and two fingers introduced into the lower angle of the wound and the edges lifted up, thus further displacing the intestinal coils upward by permitting air to enter the peritoneal sac.

A Balfour retractor is next put into position, being careful that all loops of intestine are free from its blades. With a sweep of the hand, the gall-bladder, stomach, hepatic and splenic flexure of the colon is explored and record made of possible pathology. The intestines are now packed off with a dry sterile goiter roll. (No pads being employed, there is therefore no possibility of leaving one in the abdomen.) The fundus, or tumor, is grasped with a large pair of Jacob's forceps and drawn through the abdominal wound, with traction, thus facilitating the freeing of all adhesions. The fundus is then drawn well over to one side, exposing the infundibulo-pelvic and round ligaments. The round ligament is first tied about 2 c. m. from its uterine attachment with No. 2 plain catgut suture, the ends being left long, a clamp applied proximal to the uterus and the ligament divided. The infundibulo-pelvic ligament is now ligated with a transfixed ligature of No. 2 catgut, distal to the ovary if it is to be removed, or proximal if it is to be retained (at least one ovary is always retained unless such conservation is impossible), a clamp applied proximal to the uterus, and the ligament divided.

The body of the uterus is now carried to the opposite side and the same procedure repeated. Additional traction is now made on the fundus, which allows the broad ligaments to recede so that the anterior and posterior layers may be easily separated. With a sharp knife the vesico-uterine fold is separated transversely from its uterine attachment, the separation of the bladder from the uterus and vagina, being com-

pleted with a pair of Mayo scissors. Two sponges, one in each fornix between bladder and vagina are securely placed and released.

Additional traction is made, and the fundus pulled forward over the pubis, and the posterior fold of the peritoneum is incised transversely just above the attachment of the utero-sacral ligaments, and this flap of peritoneum is carefully separated from the posterior surface of the uterus. The uterine arteries are freely exposed and with continued traction on the tumor a ligature is thrown around first one artery and then the other about 1 c. m. from the point of entrance of these arteries to the uterus, clamps are applied close to the ligatures on the uterine side, and then the tissue between the ligated and clamped uterine and the uterus is divided on each side and pushed away from the cervix, thus pushing the ureters out of the field of operation.

The fundus is drawn forward and upward again, and with a long pair of sharp pointed curved scissors the posterior vaginal wall is incised, entering the vagina. (In some instances it is easier to incise first the anterior vaginal wall.) The vaginal wall is incised completely around the cervix at the cervico-vaginal junction, the edge of the vaginal wound is caught at occasional intervals with forceps, thus controlling completely all bleeding.

The uterus having been removed, a continuous doubled suture of No. 2 plain catgut is begun through the anterior and posterior vaginal walls at one angle, the loop encircling the ligated stump of the uterine artery, thus doubly ligating this vessel, and continued to the middle of the vagina, another similar suture is begun at the opposite angle, the loop of the suture encircling the other ligated uterine stump and continued to the middle line—where the two sutures thus uniting the anterior and posterior vaginal walls are tied, and left long for traction on the vaginal vault.

With all bleeding which has been practically negative anyway completely con-

trolled, the round and utero-sacral ligaments are now sutured securely into the vault, care being taken that the sutures are taken through and not around the ligaments. The traction sutures are now cut. In this procedure, relaxation of the vaginal walls is unlikely.

The final step in the operation is to remove the two sponges which have kept the bladder pushed forward, and bring this reflexion of the bladder peritoneum over the vaginal stump, uniting it with the posterior fold of the peritoneum, the anterior and posterior folds of the broad ligaments being united, all raw surfaces are completely covered, and a perfectly smooth peritoneal surface is observed.

Final observation for possible hemorrhage, injury to bladder or ureters is made, the goiter roll is removed, and care is taken to replace the rectum in the cul-de-sac of Douglas, thus making it impossible for a loop of small intestine to become misplaced in this location.

The peritoneum is closed with a doubled continuous suture of No. 0 chromic catgut, a lembert stitch being taken on one under edge, so as to leave a smooth surface inside the abdomen. The muscles are united with two or three No. 1, or No. 2, plain interrupted sutures.

The aponeurosis is next closed with continuous doubled No. 1 chromic catgut suture, the lembert stitch being employed here to add strength. Several interrupted sutures of No. 1 chromic are also taken in the aponeurosis making silk-worm gut supporting sutures, where a drainage tube is not employed, unnecessary. The fat and skin are closed with a continuous No. 1 plain catgut subcutaneous suture—and several interrupted skin stitches of horse hair are taken to prevent spreading of the incision.

Summary: Complete hysterectomy may be easily, safely, and almost bloodlessly performed, and when hysterectomy is indicated for any cause, anything less than the complete removal of the entire uterus is an injustice to the patient.

DISCUSSION OF DR. QUILLIAN'S PAPER, "COMPLETE VERSUS SUB-TOTAL HYSTERECTOMY."

Dr. George R. White, Savannah:

I used to perform the sub-total hysterectomy, and I can bear witness to what Dr. Quillian has said, that difficulty comes from it. The great difficulty is that the cervix continues irritated. While I have never seen a cancer come from it, only last week I took out one because I thought it was in a pre-cancerous state.

If the uterus is bound down is a mass of adhesions and when you pull it it does not come and you have to work in a hole. I have found that if you do a sub-total hysterectomy and then core out the cervix, you will get along just as well. Of course, that presupposes that the cervix is not diseased. If it is not diseased, the danger of cancer is nil. There is no discharge following it, of course, if the mucous membrane is destroyed, and you have all the advantages of the six points of the Polack and none of the disadvantages.

OBSERVATIONS ON ASTHMA.*

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Atlanta, Ga.

This report consists of a brief review of seventy-seven consecutive cases of asthma and, I believe, gives a fair idea of the relative frequency of the various exciting causes in the Southeast. All of the cases were referred to us for investigation, study and suggestions as to treatment. The majority came from small towns and the rural districts of Georgia and adjoining states. The treatments, including some of the operative procedures for the correction of remote complications, were carried out by the patient's home physician. There were 36 males and 41 females. The duration of the disease at the time of examination varied from two weeks to thirty-two years. The average duration was about two years.

In this study, when possible, all factors having any bearing on either the asthma or the general health of the patient were investigated and recorded, however only the following points are here considered:

1. Age incidence.
2. Immediate or exciting cause of attacks as determined by sensitization tests.
3. Results of bacteriological examinations.
4. Method and time of onset of disease.
5. Remote complications.
6. Specific treatment (as distinguished from general medical care both during and between attacks).

* Read before the Ninth District Medical Society, Toccoa, Ga., March, 1922.

The age incidence at the time of examination is given in Table I. It will be noted that the majority of cases occurred in the two decades between 20 and 40, although several occurred under five and others after fifty.

AGE INCIDENCE

Age at Onset		Age at Examination	
Age—Years	No. Cases	Age—Years	No. Cases
Under 10	15	Under 10	8
10-20	7	10-20	11
20-30	13	20-30	15
30-40	27	30-40	32
40-50	12	40-50	14
50-60	3	50-60	4
Over 60		Over 60	3
Total	77	Total	77

Table I.

All patients were subjected to sensitization tests after a careful history as to onset, seasonal incidence, occupation, association with animals, residence, articles of diet, family history, past history, etc. Sixty-two (80 per cent) gave positive reactions to one or more substances. A summary of the results of sensitization tests is given in Table II.

SENSITIZATION TESTS

Substances:	Positive Reactions
FOODS—	
Egg	8
Milk	5
Chicken	3
Pork	3
Wheat	3
Potato	2
Onion	2
Oyster	1
Total	—27
BACTERIAL PROTEINS—	
Streptococcus viridans	23
Streptococcus hemolyticus	18
Staphylococcus	15
Pneumococcus	7
Diphtheroids	3
Micrococcus catarrhalis	2
Total	—68
EPIDERMAL PROTEINS—	
Horse hair	3
Cat hair	2
Dog hair	2
Goose feathers	2
Total	—9
POLLENS—	
Giant ragweed	9
Short ragweed	7

Cockleburr	3
Corn	1
Total	—20
*Grand total positive reactions	124

Table II.

* Only positive reactions are here recorded.
* These reactions occurred in only 62 cases since many reacted positively to more than one substance.

Bacteriological examinations consisted of stained smears and cultures. The cultures were made on dextrose blood agar plates, so that the greatest number of organisms might be isolated and identified, since on this medium the highly parasitic organisms grow equally as well as the harmless saprophytes. This further gives an immediate means of differentiating the various streptococci and pneumococci. In addition to cultures from the sputum (bronchial secretion) a number were made from the nasal secretions, accessory sinuses, tonsillar crypts, etc., where these presented pathological changes. In their order of frequency we found the following: streptococcus viridans and hemolyticus, pneumococci, micrococcus catarrhalis, staphylococci, diphtheroids, Gram negative bacilli, colon bacilli, and B. pyocyaneus.

In regard to the method of onset we found that 23 cases followed "flu" or "grippe," 18 severe colds, 8 measles, 7 whooping-cough, 5 broncho-pneumonia, 4 infections of the accessory sinuses and 3 infections of the female pelvic organs. In the remaining 16 cases the onset was uncertain.

Of the remote complications 42 suffered from chronic constipation; 12 had chronic malaria; 10 pyorrhea alveolaris, 10 pulmonary tuberculosis, 8 dyspepsia, 8 pronounced secondary anemia, 7 intestinal parasites, 5 abscessed teeth, 5 syphilis, 4 chronic sinus infections, 4 abnormalities of the upper air passages, 3 diseased tonsils, 3 recurrent attacks of chronic appendicitis, 3 chronic infection of the uterus or appendages, 2 chronic cholecystitis, 2 Bright's disease, 2 aneurysm of the aorta, 1 pellagra and 1 hyperthyroidism.

The treatment consisted in the correction of immediate and remote complications in so far as possible. The constipa-

tion, malaria, hook-worm disease, syphilis, chronic gonorrhea, pyorrhea, etc., were treated by appropriate measures. Those requiring the services of special methods of treatment, including surgery, were referred for this treatment. The majority requiring special treatment availed themselves of it. Those sensitive to the pollens and a few of the proteins were desensitized. Others were instructed to avoid the substances to which they were sensitive where desensitization was considered impracticable. Corrections in the diet and mode of living were suggested in many cases.

Autogenous vaccines were given to 57 patients. No effort was made to isolate a single organism, but they were made from 24-hour cultures in the proportion as they occurred in these cultures, except of course, that those showing gross contamination of saprophytes were not used. In fact it is thought that much of the benefit comes from the reactions following the injections of foreign proteins which may be only in a small measure specific. 44 cases were cured. In 15 more there was definite improvement. Of the remaining 18 cases no report was received from ten, four discontinued treatment after too short a period of time and four were unimproved. Of the latter two are now dead—one of Bright's disease and one of aneurysm of the aorta.

Conclusions.

1. Observations on a series of 77 consecutive cases of asthma are reported giving the age incidence, immediate or exciting cause, results of bacteriological examinations, method of onset of disease, remote complications and specific treatment.

2. Pollens play only a minor role as the exciting cause in this series of cases, since only 19 positive reactions were obtained in the whole series.

3. Of all the substances against which these patients were tested a larger number gave positive reactions to bacterial proteins than to all others combined. Therefore, in this series, at least, the bac-

terial flora of the respiratory tract plays the leading etiological role.

4. Many patients suffer from remote complications which must be treated, in addition to the specific treatment for asthma, in order to effect a cure.

5. Results were obtained from the use of autogenous vaccines which justify their employment in this type of respiratory infection.

65 Forrest Avenue.

A REPORT OF 1,000 OBSTETRICAL CASES IN PRIVATE PRACTICE.*

Marion T. Benson, M. D., F. A. C. S.

Gynecologist to Grady Memorial Hospital, Davis-Fischer Sanatorium, and Georgia Baptist Hospital.
Atlanta, Ga.

When we consider the high mortality of women at child-birth and the many complications following infection at this period of woman's life, it is well for us to review our work in these lines and compare it with our fellow obstetricians. Having this in mind, I have reviewed my records and am reporting a synopsis of 1,000 consecutive cases in my private practice.

I attribute my success so far as infection is concerned to careful technique, both before and after delivery. None of these cases were taken from my work in the general city hospital, as the mortality, infections, etc., run higher where the emergency cases are accepted: but they were delivered in hovels as well as in palaces, in poorly equipped hospitals as well as Class A hospitals, in dirt or under the best aseptic conditions.

In reviewing these cases we find the ages of the mothers to be from 14 to 45 years. The number of primiparas 391 or 39.1%, and multiparas 609 or 60.9%. The number of male babies 502 or 50.2%, the number of female babies 498 or 49.8%. Out of these 1,000 deliveries there were seven pairs of twins.

The presentations were 940 normal or 94 per cent, abnormal presentations 60 or

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

6 per cent. Of the abnormal presentations, I find breech presentations 24, feet 15, brow 10, hand and shoulder 3, placenta-previa 2, and others of slight abnormal presentation 6, making a total of 60 abnormal presentations. The feet and breech presentations we delivered as such. The others were delivered by forceps or changed by version as the circumstances demanded. On one placenta-previa a Caesarean section was performed; on the second a rapid dilatation with forceps delivery was performed, only five minutes being consumed in dilating the cervix and delivery, and very little blood was lost.

Of these 1,000 cases 877 or 87.7% were normal deliveries, while 118 or 11.8% were forceps deliveries. There were five Caesarean sections for which the indications were: contracted pelvices 2, placenta-previa 1, and eclampsia 2.

I would like to call attention to the very small number of Caesareans which I have found indicated in these 1,000 cases—not that I am opposed to this procedure, for I have come to the conclusion that all primiparas over thirty-five years of age, who do not go into labor easily and progress normally should undergo a Caesarean section in order to have a viable baby; as my experience has been that in the majority of these cases where the labor is prolonged and forceps used a still-born baby and a badly lacerated perineum are the results.

The conditions of the new-born of this series were: alive 943 or 94.3%; still-born to term 39 or 3.9 per cent; still-born premature 18 or 1.08 per cent; injuries to head 4 or .04 per cent; cleft palates and hair-lips 3 or .03 per cent, and spina-bifida 2 or .02 per cent.

Let us report that in regard to the conditions of the mothers there was a mortality of six out of the 1,000, and three of this number were due to the epidemic of influenza in 1918. Two were due to acute nephritis and one was due to post-partum hemorrhage. This was a multipara, fourth baby, all still-born. I believe that this

case would have been saved if instructions had been followed.

Eclampsias in these cases were 4 or .04 per cent; lacerations of the perineum were 226 or 22.6 per cent. These were further divided into 1st degree 101, 2nd degree 122, and 3rd degree 3, making a total of 226. All lacerations were repaired immediately with primary union.

During the last meeting of the American College of Surgeons in Philadelphia, I had the pleasure of attending the Hirst clinic at the University of Pennsylvania Hospital. Dr. Hirst claims that no perineum should be repaired at the time of injury as it is impossible at that time to make the proper repairs and approximations. He states that he repairs these cases the seventh day following delivery. Personally I believe that this is a needless procedure, especially when the majority of cases are delivered in the private homes. We believe that it is best to repair the cases at the time of delivery and if the muscular approximation is not good to re-repair at a later date.

Last but not least in this report or synopsis of cases, I am happy to report NO infections. I do not like to boast, for it usually follows after such supreme confidence that we get into serious trouble. I am merely reporting my obstetrical work as my case records show.

In regard to puerperal infection the chief thing for the obstetrician and general practitioner to consider is cleanliness. Before delivery we should have our hands in as near an aseptic condition as possible. The patient's vaginal orifices both internal and external should be well cleansed. The delivery should be done under aseptic conditions and the perineum and the surrounding field should be cared for in an aseptic manner. The physician or obstetrician should never handle pus with his bare hands. I have made it a rule for the past 12 years never to touch pus in any form without gloves for this is one of the most common causes of infection.

Another point to keep down infection is to examine the delivered placenta and be

Ages	Sex	Presentation	Deliveries	Condition of Mothers	Condition of New Born	Lacerations	Infections	Abnormalities of the New Born
14 to 45	Males 502	Normal 940	Normal 877	Mortality 6	Alive 943	Perineal 226	None	Spina-bifida 2
Primiparas 391	Females 498	Abnormal 60	Forceps 118	Influenza ... 3 Acute Nep. ... 2 Post-partem Hem. ... 1	Stillborn to Term 39	1st degree...101 2nd degree...122 3rd degree... 3 Total226		Cleft Palate and Hair-lips 3
Multiparas 609	Twins 7	Breech 24 Feet 15 Brow 10 Shoulder ... 3 Pla.-Prev. ... 2 Others 6 Total ... 60	Caesarean Sections 5	Eclampsias 4	Stillborn Premature 18	Repair of Perineum 226	None	Club-feet 2
		Contracted Pelves 2			Injuries to Head 4			

TABLE I

sure that it is intact. One of the most common modes of infection is a small portion of placenta left in the uterus. Many a woman has lost her life or had serious puerperal infection from this.

We also attribute our success in these cases to the use of pituitrin. All of our deliveries have from one to three c.c.'s of pituitrin, which causes a firm contraction of the uterus, squeezing out, so to speak, any debris that may be retained in the uterus following the delivery of the placenta. This also keeps the uterus well contracted after the delivery, and we have noticed that in the cases of the multiparas that they suffer very little with the so-called after-pains, which is a great relief for those who have suffered for the usual three days.

In conclusion let me urge upon all those who are doing obstetrics to:

1. Educate all expectant mothers to place themselves under the physician's care early, either in the first or second month.

2. Make a careful physical as well as pelvic examination at this time, especially in primiparas.

3. Examine urine often during the nine months of gestation.

4. See that patient eliminates thoroughly during this period, both before and after delivery.

5. Advise your patients in regard to exercise, rest, food, clothing and elimination.

6. Keep your hands free from infection. When handling pus, wear gloves.

7. Practice asepsis before and after delivery and see that the nurse does the same.

8. Examine the delivered placenta carefully. Remove any detached portion which may be left in the uterus.

9. The use of pituitrin for firm uterine contraction.

If these few simple procedures are carried out, puerperal infection will be eliminated.

504-7 Atlanta National Bank Building.

NATIONAL BOARD EXAMINATION.

The National Board of Medical Examiners announces the following dates for its next examinations:

Part I. February 12, 13 and 14, 1923.

Part II: February 15th and 16th, 1923.

The fees for these examinations have been continued at the reduced rate for another year. Applications for these examinations must be forwarded not later than January 1, 1923. Application blanks and circulars of information may be obtained from the Secretary of the National Board, Dr. J. S. Rodman, Medical Arts Building, Philadelphia, Pa.

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

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JANUARY, 1923

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

EDITORIAL DEPARTMENT**HYGEIA: A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH.**

Every thoughtful physician has long felt the need of bridging the gap between the medical profession and the layman. How often have we heard the remark, "Yes, we know tuberculosis, syphilis, diphtheria and malaria cannot be cured by manipulating the spine, but what good is that to the patient? He doesn't know it. If we say it cannot be done he believes that it is because we are prejudiced." The only method by which these false ideas can be successfully combated is by education along the proper channels. The Medical Association of Georgia through its Committee on Health and Public Health Education has undertaken the organization of committees on public health throughout the state. These are functioning. We expect much from them. They should be the strongest factor for correct thinking, medically speaking, in their respective communities.

However, our great parent body, The American Medical Association, has come

to our aid in the establishment of a magazine for physician and layman—Hygeia. This will give the layman correct information on medical and public health matters. It will bridge the gap and create a better understanding between both. As is stated in the announcement: "The practitioner of today holds in his hands the most potent forces ever available for fighting disease. Yet, on all sides there prevails a mass of ignorance and superstition proportionately as great as in the days of the primitive medicine man. The physician is working under a great handicap; the layman is not fully benefiting by what medical science can do in promoting his well-being. Both suffer a disadvantage. Obviously the remedy lies in educating the general public on health matters. This is the function of the new health magazine founded by The American Medical Association."

This magazine should be in every physician's reception room, on the reading table of every public library, school library, Y. M. C. A., Y. W. C. A., woman's club and every other place where it can be available for the general public. No better work can be done by every county society in the state than to see to it that this magazine is placed in every library in its county. The first issue will appear in April. A special inducement of eight months for one dollar is offered by the association. It is the opinion of the writer that a wide distribution of this magazine will do more than any other one thing at the present time to combat irregular practitioners in Georgia. Let every member of the association appoint himself a committee of one to send in as many subscriptions as possible. A coupon will be found in this issue of our journal.

SYMPOSIUM ON DISEASES OF CHILDREN.

We are very fortunate in being able to begin the New Year with so valuable a series of articles and discussions as will be found in the Symposium on Diseases of Children. Although these articles deal with

children's diseases, much is found in them which will prove of benefit to every member of our profession. Over-medication in infants and children furnish food for thought about over-medication in adults. Complementary breast feeding, thanks to our progressive pediatrician, is today building a stronger and healthier infant population. A proper use of antitoxin and intubation in diphtheria is decreasing infant morbidity and mortality. The proper control of the common contagious disease is an important problem for every community. When we realize that many times more infants and children are being treated every day by the general practitioner than by the man limiting his work, we realize the importance of and great good which may be accomplished by the State Pediatric Society. And finally, the proper treatment of congenital syphilis is a subject of the utmost importance to every thoughtful citizen and physician. All those subjects are handled well by the writers. The papers are thoughtfully prepared and well written. The discussions are illuminating. More power to our Pediatricians.

THE ACADEMY OF MEDICINE.

Geo. M. Niles, M. D.

From time out of mind the Fulton County Medical Society has cherished the laudable ambition to own its own home, to establish its own medical Lares and Penates. The accomplishment of this was hedged about by many difficulties. To provide an assembly hall of sufficient capacity for its large and growing membership, to supply space for a library and committee rooms, to place this in an eligible location, and invest such an edifice with the dignity befitting its proper use, apparently entailed an expense greater than that possessed by an organization richer in ideals than in the coin of the realm. However, a number of ardent and undaunted spirits attacked this problem, and so earnest were their intelligent efforts, that they infused a like ambition in practically every member of the Society. The culmination of these efforts resulted in

the purchase of the spacious building at 32 Howard street. This building has been remodeled so as to supply an adequate assembly hall, an attractive library, several committee rooms, and a number of smaller rooms suitable for professional offices or living apartments. The tasteful arrangement, and various conveniences of this building, as it has been remodeled, needs only to be seen to be appreciated. It has been fitly named the Academy of Medicine—a name that will become more dear to the members of the Fulton County Medical Society as the years pass by.

The opening meeting of the Academy of Medicine took place December 7th and was somewhat in the nature of a house-warming. The guest of honor for this auspicious occasion was Dr. J. Shelton Horsley, of Richmond, Va., who delivered a scholarly address, entitled "The Relation of Biology to Medicine." His treatment of the theme was both erudite and stimulating, and his hearers felt honored by the presence of so distinguished a visitor in their new home.

The dedicatory services of the Academy of Medicine took place Friday evening, December 15th, and this program could fitly be denominated a feast of reason and flow of the soul. The assembly hall was filled to its capacity, many ladies honoring the occasion with their presence. The exercises were opened with a prayer by Dr. Marion McHenry Hull, this being followed by a piano solo by Miss Marguerite Bartholomew. Dr. E. C. Thrash then introduced Rev. C. W. Daniel, who, in an eloquent address, dedicated the Academy of Medicine as a whole to the advancement of science, to the fostering of a fraternal spirit in the medical profession, and to the upbuilding of morale among the disciples of Esculapius and the followers of Hippocrates. Next came two charming vocal selections by Miss Mabel Whitney. Dr. J. L. Campbell then introduced Mr. Lucian Lamar Knight, who was chosen to dedicate the Abner W. Calhoun Assembly Hall, which is to perpetuate the memory of that honored physician, who has gone

before. Mr. Knight's address was an oratorical gem, scintillating with classic allusions, embellished with quotations garnered from every age and clime. It was a noble tribute to a noble man. After a tuneful violin solo by Miss Mary McCool, Dr. R. R. Daly introduced Bishop Warren A. Candler, who, in his usual trenchant and incisive style, dedicated the John G. Westmoreland Library. Dr. Westmoreland was one of the medical pioneers of Atlanta. He established the Atlanta Medical College in 1853, and was one of several who launched on its career the then modest Fulton County Medical Society. How wisely he builded is exhibited by the present Emory University, the present Fulton County Medical Society, the largest medical organization in the South, and its crowning achievement, the Academy of Medicine.

This Academy, while naturally proud of its existence, realizes that its avenues of usefulness and honor have just opened up. It desires to foster the natural bond of union between all right-thinking and right-striving medical men, to stimulate scientific endeavor, to encourage worthy efforts, and withal, to constitute a real home and haven for the medical profession of Atlanta, the State of Georgia, and the South; and to this end the latch string will remain on the outside, a welcome will await all visitors, and the Society will endeavor to create an atmosphere at all times hospitable, as well as scientific. To the accomplishment of this worthy aim, the Fulton County Medical Society, individually, severally, and collectively is pledged. It is the desire of our hearts that the Academy of Medicine may be as a beacon to all who desire a more exalted scientific altitude—that it may truly be "A lamp unto our feet, and a light unto our path."

THIRD DISTRICT MEDICAL SOCIETY.

The Third District Medical Society held its thirty-first semi-annual session on November 22, 1922, in the Carnegie Library at Americus, Ga. The meeting was called

to order by the president, Dr. T. E. Bradley. Invocation by Dr. Carl Minor, pastor First Baptist church. Address of welcome on behalf of Sumter County Medical Society by Dr. B. T. Wise. The following scientific program was rendered:

Papers.

Report of Tuberculosis Clinic, with Randolph Co. Medical Society—Miss Annett McDonald, Secretary T. B. Society of Ga., Cuthbert, Ga.

"Dengue"—Dr. J. A. Ward, Cordele, Ga.

"Dengue"—Dr. T. F. Abercrombie, State Health Commissioner, Atlanta, Ga.

"An Unusual Case"—Dr. L. F. Grubbs, Americus, Ga.

"Eye Symptoms in General Diseases"—Dr. C. L. Pennington, Macon, Ga.

Address—Dr. J. M. Smith, President Medical Association of Ga., Valdosta, Ga.

Report of Councillor—Dr. V. O. Harvard, Arabi, Ga.

The wives of the Sumter County Medical Society doctors entertained the visiting ladies at the Windsor Hotel. Banquet at Windsor Hotel at 8:15.

11TH DISTRICT MEDICAL SOCIETY.

The Eleventh District Medical Society held its twenty-third annual meeting on November 21, 1922, in the Chamber of Commerce at Waycross, Ga. The following scientific program was rendered:

Address by the President—Dr. Frank Bird, Valdosta, Ga.

Some Helpful Suggestions Learned in Post Graduate Work and by Experience—Dr. H. G. Hughey, Homerville, Ga.

Pellagra and Its Specific Treatment—Dr. L. L. Whiddon, Ocilla, Ga.

Studies in Carbohydrate Metabolism—Dr. Marvin Smith, Jacksonville, Ga.

Tendon Suturing and Report of Cases—Dr. Kenneth McCullough, Waycross, Ga.

Hyper and Hypo-Thyroidism—Dr. A. G. Little, Valdosta, Ga.

Pittfalls in Goitre Management, with Case Reports Illustrating Common Types—Dr. C. W. Roberts, Atlanta, Ga.

(Subject Unannounced)—Dr. Robt. B.

Slocum, Wilmington, N. C., Supt. Relief Department A. C. L. Ry.

Double Ureter, Report of Case—Dr. W. C. Hafford, Waycross, Ga.

Compound Multiple Fracture of the Lower Jaw, Case Report—Dr. J. W. Simmons, Brunswick, Ga.

Surgical Tuberculosis—Dr. R. L. Johnson, Waycross, Ga.

(Subject Unannounced)—Dr. P. C. Quarterman, Valdosta, Ga.

Immediately after the scientific program a business session was held at 8 p. m. with banquet at Phoenix Hotel, guests of Ware County Medical Society.

SIXTH DISTRICT MEDICAL SOCIETY.

The Sixth District Medical Society held its semi-annual meeting on November 23, 1922, at Griffin, Ga. The following Scientific Program was rendered:

Program.

Opening Prayer—Dr. J. Marion Stafford, Griffin.

Address of Welcome for the City—Hon. S. B. Frye, Griffin.

Address of Welcome for the Spalding County Society—Dr. E. R. Anthony, Sr., Griffin.

Response to Welcome—Dr. C. D. Cleg-horn, Macon.

1. "Cholelithiasis With Empyema of the Gall Bladder, Complicating Pregnancy"—Dr. J. C. Pate, Macon.

2. "Scabies, Complications and Sequelae"—Dr. J. M. Sigman, Macon.

3. "Facts About Our State Journal"—Dr. M. C. Pruitt, Atlanta.

4. "Stone in the Bladder, Its Causes, Diagnosis and Treatment"—Dr. M. F. Carson, Griffin.

5. "Pyonephrosis," Report of an unusual case—Dr. O. H. Weaver, Macon.

6. "Report of Surgical Cases"—Dr. C. C. Harrold, Macon.

7. "Report of One Hundred and Twenty-five Operations for Appendicitis with Plea for Early Diagnosis"—Dr. A. H. Frye, Griffin.

8. "Clinical Resemblance of Typhoid and Malaria": (a) Discussion of Typhoid and

Malaria. (b) Resemblance of Symptoms. (c) Report of Case of Typhoid Complicated with Aestivo Autumnal Fever—Dr. E. R. Anthony, Sr., Griffin.

9. "Moving Pictures on Malaria and the Preparation and Administration of 606"—Dr. Jas. P. Bowdoin, State Board of Health.

Griffin showed her usual spirit of hospitality in serving a most delightful barbecue.

CLARKE COUNTY MEDICAL SOCIETY.

The Clarke County Medical Society was entertained by the retiring president, Dr. W. H. Cabaniss, at a buffet supper at his home on December 21st. The occasion was the annual meeting and election of officers for 1923. The following officers were elected:

President—Dr. A. A. Rayle.

Vice-President—Dr. H. I. Reynolds.

Secretary-Treasurer—Dr. Joseph S. Stewart, Jr.

Delegate to State Convention—Dr. Linton Gerdine.

Alternate—Dr. John A. Hunnicutt, Jr.

Censors—Three years, Dr. M. F. Matthews; two years, Dr. A. B. Patton; one year, Dr. R. M. Goss.

RANDOLPH COUNTY MEDICAL SOCIETY.

Randolph County Medical Society announces the following officers for the year 1923:

President—Dr. T. F. Harper, Coleman, Ga.

Vice-President—Dr. E. C. McCurdy, Shellman, Ga.

Secretary-Treasurer—Dr. G. Y. Moore, Cuthbert, Ga.

Board of Censors—Drs. F. S. Rogers, F. D. Patterson and W. W. Crook.

BARTOW COUNTY MEDICAL SOCIETY.

Bartow County Medical Society announces the following officers for the year 1923:

President—Dr. R. P. Adams, Bethlehem, Ga.

Vice-President—Dr. S. T. Ross, Winder, Ga.

Secretary-Treasurer—Dr. W. T. Randolph, Winder, Ga.

Board of Censors—Drs. W. L. Mathews, E. R. Harris and C. B. Almand.

ANNOUNCEMENT.

The Seventh Annual Clinical Session of the American Congress on Internal Medicine will be held in the amphitheaters, wards and laboratories of the various institutions concerned with medical teaching, at Philadelphia, Pa., beginning Monday, April 2, 1923.

You are earnestly requested to plan for this week of intensive post-graduate training. The Philadelphia meeting of the Congress promises to be the most useful yet held. Complete details regarding the session will be forwarded you in due course.

Address inquiries to Frank Smithies, Secretary-General, 1002 N. Dearborn St., Chicago, Ill.

Dr. J. J. C. Wright announces removal of his offices from Culloden, Georgia, to Tennille, Ga.

Dr. Joseph Hiram Kite announces the opening of his offices at 20 Ponce De Leon Ave., Atlanta, Ga. Practice limited to surgery.

Charles Usher, M. D., F. A. C. S., Savannah, wishes to announce that after January 1, 1923, his practice will be limited to general surgery.

Dr. William Howard Hailey wishes to announce the removal of his offices to 807 Candler building, Atlanta. Practice limited to diseases of the skin, radium and x-ray therapy.

Dr. B. McH. Cline announces the removal of his offices to 79 Forrest Ave., Atlanta, Ga. Practice limited to eye, ear, nose and throat.

Dr. Ben H. Clifton announces the opening of offices at 812 Hurt building, Atlanta, Ga. Special attention to surgery.

COMMUNICATIONS.

Actinomycosis.

December 6, 1922.

To the Editor:

I am endeavoring to make a complete study of the distribution of human actinomycosis in this country. The number of cases reported in the literature is surprisingly small, and I know that the disease is not so rare as is sometimes thought. I shall greatly appreciate hearing directly from any one who has had experience with this disease, and desire to know concerning case histories the following: age, sex, occupation, residence, state in which the disease was contracted, location of lesion, duration of symptoms, and any special points of interest connected with the treatment, outcome of the disease, or necropsy findings.

A. H. SANFORD, M.D., Mayo Clinic,
Rochester, Minnesota.

INFECTIOUS JAUNDICE.

To the Editor:

The undersigned is desirous of obtaining information regarding the prevalence of Infectious Jaundice in your state.

The disease is non-reportable and information regarding its prevalence cannot therefore be obtained from Boards of Health.

I shall be grateful for any reports of outbreaks your readers may care to send me.

GEORGE BLUMER, M.D.,
195 Church Street,
New Haven, Conn.

THE QUACK WE HAVE ALWAYS WITH US.

With quackery rampant, with the flourishing of cults and medical mountebanks, we are likely to feel that quackery never thrived as it does today. Then we read:

"As matters stand at present, it is easier to cheat a man of his life than of a shilling, and almost impossible either to detect or punish the offender. Notwithstanding this, people still shut their eyes, and take

everything upon trust that is administered by any pretender to medicine, without daring to ask him a reason for any part of his conduct. Implicit faith, everywhere else the object of ridicule, is still sacred here. . . . It would certainly be for the safety, as well as the honor of mankind, to have some check upon the conduct of those to whom they intrust so valuable a treasure as health."

This was written nearly one hundred and forty years ago (1783) by William Buchan, Fellow of the Royal College of Physicians, Edinburgh, a few years after the vogue of Bishop Berkeley's "Tar-Water" and "Spot" Ward's "Drops," and a little before the time of Elisha Perkins' "Metallic Tractors."—*Jour. A. M. A.*, Dec. 9, 1922.

THE SLAUGHTER OF THE INNOCENTS

Two more children have been offered up as sacrifices to the theological views of undoubtedly sincere but certainly misguided parents. It is none of the public's business. One of the parents says it isn't! In Cincinnati a 15-year-old high school girl was taken sick on October 24. Her mother had faith in divine healing and therefore did not call a physician. Nine days later events had shaken her faith enough to make her willing that a physician be called, but not enough to make her willing that the physician should administer antitoxin. The girl died the next day.

In Spokane, Wash., under "Christian Science treatment," John Earl Halverson, 6 years and 11 months old, died, November 19, from diphtheria after a week's illness. The father stated to the press his views as follows: "We are Christian Scientists and do not believe in antitoxins, so no doctor was called. I see no reason for making any fuss over this case any more than over any other death. The public is not interested in what the child died of, and I wish you would not make mention of the case."—*Jour. A. M. A.*, Dec. 9, 1922.

THE MORTALITY FROM CANCER.

Statistics again indicate a rise in the mortality from cancer. The returns for 1921 compiled by the Bureau of the Census show that more than 76,000 deaths were due to cancer in the death registration area. Assuming that the death rate from cancer in the entire country in 1921 was 93,000, which is 4,000 more than the number estimated for 1920. The cancer death rate in the registration area in 1921 was 86 per hundred thousand, against 83.4 for 1920. The Journal has pointed out* that a part of the reported increase in cancer is probably due to changes in the sex and age composition of the population. A state, for example, having comparatively more women or aged persons would be expected to have a higher mortality rate from cancer. The Census Bureau makes allowance for this difference in the sex and age distribution of the population by using "adjusted" rates when comparing one state with another, but gives no data on the "adjusted" cancer rate for the preceding year. The highest "adjusted" cancer rate for 1921 was in Massachusetts (99.6 per hundred thousand); the lowest in South Carolina (47.6). When separate "adjusted" rates were calculated for the white and colored population, the highest rate for white people was found in New York (95.9), and the lowest in Tennessee (51.5). The highest adjusted cancer rate for colored people was also in New York (90.6), and the lowest for colored people in Florida (36.4). In commenting on these figures, the Department of Commerce says that the white and colored races seem equally susceptible to cancer, but both races seem less susceptible in the South than in the North. Statistics sometimes lead us astray by their apparent clearness, which later is found to be a mere mirage. In this instance, the strict interpretation of figures fails to consider that "we find the cancer death rate highest in the most advanced communities, and lowest in the most backward, not because 'cancer is a disease of civilization,' but simply because in the former localities the statistics come

nearer reflecting the actual facts."** The Bureau of the Census possibly found more cancer in New York and Massachusetts because in those states there are more hospitals, more physicians, and more intense efforts to diagnose cancer.—*Jour. A. M. A.*, Nov. 25, 1922.

*The Statistical Evidence of Cancer Increase, editorial, *J. A. M. A.* 69:2117 (Dec. 22) 1917.

**The Incidence of Cancer, editorial, *J. A. M. A.* 78:1818 (June 10) 1922.

POOR CALIFORNIA.

The chiropractors of California, through an adroitly worded bill and a clever and misleading propaganda, appealed for an independent chiropractic licensing board to the sympathy and lack of understanding on the part of the voters of the state, and at the election of November 7, under the initiative, they won. They carried along with them the struggling osteopaths, who were given an independent licensing board of their own. Now the people of California can have their backbones chiropractically analyzed and adjusted, and their inflamed appendixes osteopathically rubbed to the point of rupture, by any person whom the State Board of Chiropractic Examiners or the Board of Osteopathic Examiners of the State of California, as the case may be, sees fit under the law to set loose on the suffering community. The Board of Medical Examiners of the State of California is relieved from all duty and responsibility in the premises. The only evidence of state sanity from the medical standpoint in the California situation, as far as was disclosed by the recent election, was the defeat of the measure which aimed to prevent the use of living animals for research designed to advance medical science and the welfare of men and of dumb animals.

What chiropractic is, the California law does not say. One licensed by the board of chiropractic examiners is authorized "to practice chiropractic in the state of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical, and hygienic and sanitary measures incident to the care of the body;" but his license does not authorize "the

practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in the materia medica." The law creating the board of osteopathic examiners omits altogether any definition of osteopathy, but provides that the board shall in respect to all matters relating to graduates of osteopathic schools, applying for or holding any form of certificate or license, take over, exercise and perform all the functions and duties imposed on and heretofore exercised or performed by the board of medical examiners.

What a chiropractor and an osteopath may do under licenses issued by these new boards will doubtless be determined in the courts, if interested prosecuting officers can be found who will bring prosecutions in cases of apparent violation of the law. It is said that the chiropractors will be entitled to sign birth and death certificates, be health officers, and fill any official position connected with the practice of medicine and public health.—*J. A. M. A.*, Nov. 18, 1922.

WELCOME !!!

On page 1932 of the December 2 issue of the *Journal of the American Medical Association* appears the long waited announcement of the early appearance of a medical magazine for lay readers. Authorized by the 1922 House of Delegates and published by the Board of Trustees of the American Medical Association, this monthly magazine will be devoted to the development of individual and community health, based on the accumulated experience of generations of medical scientists in sickness prevention. In physical make-up the magazine will rival *Scribner's*; in literary excellence, the *Atlantic Monthly*. The world's best writers, both scientific and popular, will strive to present their discussions in brief and simple terms.

Many of us have dreamed for years of an opportunity to create for the mind of our intelligent public a medium for authoritative information on the altruistic phases of medical practice. OUR opportunity ap-

parently is at hand. OUR organization, thoroughly democratic, creates this new magazine, and its initial success will depend on OUR contributions to its debut. On advertising page 17 of the December 2 Journal, appears a special one dollar subscription open to Fellows of the Association. We trust that our members will promptly take advantage of this limited offer.

We respectfully suggest to our Board of Directors consideration of the advisability of recommending complimentary, on behalf of the Allegheny County Medical Society, this introductory subscription in the name of the Allegheny County headquarters of each Public Health Agency and the Superintendent of each grade school in this county.

Let us prepare a warm welcome for "Hygeia," a Journal of Individual and Community Health, founded and published by the American Medical Association.—(Pittsburgh Medical Bulletin [Official Journal of Allegheny County Medical Society], December, 1922.)

Surgical and Mechanical Treatment of Peripheral Nerves, by Byron Stookey, M.D., Associate in Neurology, Columbia University; Assistant Professor of Neurosurgery, New York Post-Graduate Medical School and Hospital. With a chapter on Nerve Degeneration and Regeneration by G. Carl Huber, M.D., Professor of Anatomy, University of Michigan. Octavo volume of 475 pages with 217 illustrations, 8 in colors and 20 charts. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$10.00 net.

The author begins his book with a chapter on the minute anatomy of the spinal nerves. This forms an excellent introduction to the subsequent chapters as the author keeps the anatomic and histologic features foremost in the practical consideration of his subject. The technique of the various operations on peripheral

nerves are clearly set forth both in text and by illustration. Of particular value to the surgeon is the chapter on "Indications for Operation—The Time to Operate, and the Causes of Failure." This is followed by a chapter on "Mechanical Treatment," the neglect of which has doubtless been the cause of failure when the surgeon's operation had been above reproach. The surgeon who does peripheral nerve surgery must be somewhat of an orthopedist or else associate with an orthopedist in order to bring these cases to a successful issue.

The following chapters contain detailed descriptions of the various nerves and nerve plexuses most liable to injury, and the type of treatment applicable to each. In each description the reader is again impressed with the fact that the author has in mind always the minute anatomy of the particular structure being dealt with. The last three chapters deal with nerve tumors, amputation and causalgia.

The real classic of the book is the chapter on nerve degeneration and regeneration by G. Carl Huber, Professor of Anatomy in the University of Michigan. Dr. Huber's researches in peripheral nerves stand out prominently in medical literature, and there is no one in America whom the author could have selected who could better contribute this feature of the book. The chapter reviews admirably the subject of degeneration of nerves, and much that is brought out is based on Dr. Huber's original work.

The book as a whole is well balanced, amply illustrated, and clearly written. In addition to the subject matter there are excellent tables of references at the end of each chapter. Besides being a valuable contribution to the subject of surgery of the peripheral nerves, it serves as a most excellent reference book on the anatomy of peripheral nerves.

DOWMAN.

The Reactions of Boston to the "Reactions" of Abrams.—Abrams gave a clinical demonstration of his methods in the laboratory of one of his disciples in Boston. Abrams refused to submit the method, it is said, to any test offered, but confined himself to demonstrating the presence of lesions the existence of which could be proved only by postmortem examination. A member of the staff of the Boston Medical and Surgical Journal, a man in perfect health, was selected for experiment. By his diagnostic methods Abrams discovered in this healthy individual a streptococcus infection, tuberculosis of the intestinal tract, congenital syphilis and intestinal sarcoma. Otherwise the man was all right. It is understood that the volunteer inconsiderately refused to submit to a postmortem examination.—(Jour. A. M. A., Oct. 28, 1922, p. 1524.)

THE ORANGE SLIP.

The orange-colored slip which you will find in this issue means much to the Association and your Journal. For the Association to meet its financial obligations promptly its affairs must be conducted in a business-like manner. Fill in the slip and forward it, together with your check, to the Secretary-Treasurer of your county society as promptly as you pay your telephone and grocery bills. This will help him send in a prompt and complete report. The Association's year begins January 1st and ends December 31st.

BOOK REVIEWS.

The Operating Room, by Amy Armour Smith, R.N.

The writer of this book has covered the subject minutely and clearly. Every phase of the operating room is fully discussed in the thirty-two chapters. One chapter is devoted to nomenclature of the operating room, while another chapter

takes up formulae and directions; in fact, nothing seems to have been overlooked in this little book and it would be a valuable addition to the library of anyone interested in the proper functioning of an operating room.

The book was written by a nurse for the benefit of pupil nurses, yet it seems to me that surgeon, hospital superintendent or graduate nurse who reads it will consider the time well spent.

ED. H. GREENE.

MARRIAGES.

Miss Metta Martha Haar to Dr. Lehman William Williams, on Wednesday, November 22nd, St. Paul Evangelical Lutheran Church, Savannah, Ga.

Miss Joyce Louise White to Dr. Julian Holt Buff, on Thursday, January 4th, St. Marks Methodist Church, Atlanta, Ga.

BOOKS RECEIVED.

The Surgical Clinics of North America, St. Louis Number, December, 1922. The Surgical Clinics of North America (issued serially, one number every other month). Volume II, Number VI (St. Louis Number, December, 1922), 248 pages, with 105 illustrations and complete index to Volume II. Per clinic year (February, 1922, to December, 1922). Paper, \$12.00 net; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

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No. 2

THE USE OF RADIUM IN TREATMENT OF CANCER OF THE CERVIX.*

O. D. Hall, M. D.
Atlanta, Ga.

The greatest scourge menacing our women today is cancer of the cervix. Mortality records show that as a cause of death among women of all ages it ranks second to tuberculosis, and as a cause of death among women over thirty-five it has the ominous distinction of ranking first. Nor do these figures tell the entire mournful story. Cancer of the cervix is peculiarly a disease of women who have borne children, the more children, the greater liability to cervical cancer, so that it becomes an agent of peculiarly sinister power, for it snatches away mothers and heads of households just at the zenith of their usefulness, leaving vacant the places that are difficult—one may well say, impossible—ever to fill.

During the last ten years strenuous efforts have been made by various agencies, notable among them the American Society for the Control of Cancer, to reduce the frightful mortality from all forms of the disease, and especially in the case of women threatened with cancer of the uterus, to disseminate popular understanding of the causes and early indications of the condition, so that these women would present themselves for examination and treatment, soon enough to give the medical profession a chance to combat the disease in its initial stages. Much progress has undoubtedly been made along these lines, but the fact remains that the incidence of cancer of all kinds has steadily increased during the period covered by this endeavor, so that today we are seeing more cases of uterine, and especially cervical-carcinoma

than ever before. That this may be due in some measure directly to the efforts of which we have spoken, is well within the bounds of possibility. With increased ability to detect early symptoms many women have doubtless consulted their physicians who a few years earlier would have gone to their graves with the condition unrecognized, or have made possible a speedy cure by the same prompt action. But discount it as you may the fearful situation still confronts us, and urges upon us the necessity of arming ourselves against this dreadful agent of destruction with every means in our power.

The one new weapon which has reached the hand of him who is engaged in this struggle is radium. Although it has been in use too short a time to enable us to generalize as to its power and value, the mass of evidence in its favor piling up on every side, is already much too impressive to be disregarded. Moreover the outcome of surgical intervention has in many instances proved so tragically disappointing that we are eager to consider anything which offers the slightest hope of bettering our results and lowering the death rate among our cancer patients. As I was the first medical man in this section of the country to undertake the treatment of cervical cancer by radium, I feel that I owe it to that part of the profession practicing in this region to offer some account of my results during the six years I have been employing this therapy, and to discuss the cases which have been under my care, while comparing them with those of others in different parts of the country.

The use of radium in the treatment of cancer, especially cancer located in the female genital organs, can now be said to have passed beyond experimental stage.

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

We may not have settled all the questions regarding amount of dosage, methods of screening, number of treatments, mode of application, and so on, but the essentials in regard to the treatment are now fairly well established, and in the near future we can hope to see definite standards set up according to the best authorities.

There are two varieties of cancer of the cervix—squamous-cell carcinoma and adenocarcinoma. The squamous-cell variety, which is the one more frequently encountered, has its origin in the squamous epithelium which covers the mucous membrane lining the vaginal portion of the cervix, and gives rise to the so-called “cauliflower type” of carcinoma. Adenocarcinoma starts primarily in the cervical canal, arising either from the cylindrical epithelial lining of the canal itself, or in the glands of the cervix. Because of the comparative accessibility of its location any carcinoma of the cervix lends itself quite well to treatment by radium emanations. This same treatment may of course, be applied with equal truth to treatment by surgery, but it is not my purpose to consider surgery as a mode of treatment, other than to discuss briefly, the relative value of the two methods, as interpreted from the results recently obtained by the greatest authorities on cervical cancer.

The entire subject of radium treatment of cancer of the uterus was very thoroughly reviewed by Janeway in 1919. In 1920 the annual meeting of the American Gynecological Society was largely devoted to a symposium on this subject, and similar attention was given to it by the Section of Gynecology of the American Medical Association which convened at Boston in 1921. The authors and speakers who took part in these presentations brought forward the latest news from the field of radium therapy, and I shall take the liberty of quoting quite freely from them before reporting my own endeavors in the same field.

Kelly and Burnham have made the most extensive use of radium in this country

and have done so under very favorable circumstances. They have reported the results on the treatment of 213 patients, fourteen of whom were operable. Of these operable cases four were treated with radium alone, and are all well, two for a period of two years and two for a period of one year after treatment. The remaining ten of the operable group were operated upon first and afterward treated with radium. All were well at the time of the report, at intervals of six months to three years after the treatment. The authors consider that these results are suggestive, when it is considered that after operation alone there is a recurrence in seventy-five per cent, and in sixty per cent of the cases in the first year. One hundred and ninety-nine patients treated were inoperable at the time of treatment; these included inoperable primary growth and inoperable recurrent cases. Fifty-three of this group are clinically cured and one hundred and nine markedly improved. Of thirty-five patients of this group, all primarily inoperable, three have remained well for four years, two for three years, and seventeen for over one year. Eighteen primarily inoperable growths of this group are now clinically cured, one patient over six years, another over four years, eleven over two years, and ten over one year. Other reports on less extensive series of cases, but with equally favorable results are quoted in Janeway's excellent paper which covers the history of radium cancer therapy through the year 1919.

The reports given out in 1920 did not deal so much with statistics but took up by preference the general subject of results, the reasons for failure when radium was used, and how these causes of failure could best be obviated; and discussed in particular whether so-called “operable cases” should be treated by radium without any resort to surgery whatever. Some very illuminating figures were, however, brought forward in these discussions. Dr. John G. Clark of Philadelphia reported thirty cases all apparently well three years after radium treatment. Some of these

patients were treated in 1914, so they had remained well for a period of six years or over. The next year he gave a more extended report on a total of 214 cases of cancer of the cervix treated by radium, of whom sixty-six are living and 148 dead. Though all observers still feel that radium has not yet been long enough in use to justify their asserting that it is a "cure" for cervical cancer, the array of favorable figures is already quite large enough to compare them with those concerning the results of surgery, and to have confidence that the resources of radium treatment are as yet hardly tapped, and its possibilities practically unlimited.

Perhaps the most burning question in regard to radium therapy at the present moment is whether the cases suitable for surgical operation shall be immediately treated by radium without any preliminary resort to the knife, although the controversy as to the relative merits of radium and surgery is still going on from all angles. In commenting on their last report, Clark and Keen say, "As will appear from our statistical tables, the percentage of patients suffering from inoperable carcinoma of the cervix and yet living without evidence of cancer from three to four years on to six and seven years is twenty-four per cent. Without doubt, no other method of treatment attended with so little danger can show such excellent results. In all our series of cases, now more than four hundred, only two deaths occurred shortly after irradiation alone. A few years ago one of us reviewed the final results in fifty-nine cases of radical operation for cancer of the cervix, and the yield of quinquennial cures was about thirty-three per cent."

"In comparing the vast outlay of surgical effort put forth in the latter class of cases with the great dangers attending the radical operation, as to both mortality and disabling results, we feel convinced that the time has about, if not quite, arrived when we shall cease to speak of any operable cases of cancer of the cervix but shall submit them all to radiation. Certain-

ly our results have led us very convincingly in this direction. As the palliative results have been so excellent and, as our statistics now appear, the actual cures have been so relatively large in the hopeless cases, it would appear illogical to submit the early operable case to the great dangers of surgical intervention and reserve only the inoperable case for radiation."

Janeway says that while a review of the cases which he reports in his paper does not, of course, prove that radium is, at the present time, the method of choice for treating primary carcinoma of the fundus or the cervix uteri, still taken in conjunction with the other reports which he quotes from the literature, it suggests to him that in a few years there will be ample proof that radium is the method of choice in the treatment of cancer of the uterus, at least of that most frequent form of uterine cancer, as well as the most difficult to manage by operation—cancer of the cervix. If the evidence he has collected from his own experience and that of others is inconclusive for operable cancer of the uterus, it is certainly conclusive for cancer of doubtful operability, and is strong enough for operable cancer of the cervix, in the light of other published observations, to make him assert that the use of radium in the treatment of early uterine cancer is, at the present, justified. Janeway cites the published figures which showed that up to 1916 only sixty-one women were reported who had survived operation for carcinoma of the cervix uteri five or more years; these figures, while probably far below the actual number, can safely be taken to indicate "what a drop in the bucket the operative treatment of cancer of the cervix is toward meeting the real demands of this malady upon the medical profession." He contrasts with this record that which has already been made with radium, notwithstanding the "immaturity" of this record, as it shows that cures have been produced of two to four years' standing in cases too extensive for operation; it has produced cures of three

years' standing and over, in a larger percentage of early cases than operation has produced—one author claiming for it in this stage 100 per cent of cures; treatment by it in no way interferes with the patient's routine of life and subjects her to no mortal hazard; and finally, it is a remedy capable of being used by anyone possessing the simplest gynecological training, after receiving certain easily acquired technical instruction. He stresses especially the greater ease with which women can be induced to undergo treatment when they can be assured of being spared all the horrors with which a surgical operation is now connected in the minds of most of them.

Rex Duncan, of California, who has had an extended experience in the use of radium in cancer of the cervix, writing in June, 1921, is of the opinion that "appropriate radium therapy in recurrent and inoperable cancer surpasses any known therapeutic agent. Pain, hemorrhage and odorous discharges are relieved and there frequently occurs prompt improvement in the general condition of the patient. Life is prolonged and there results a comparatively high percentage of clinical cures. Radium therapy when employed by one with adequate facilities, skill and experience, is the treatment of choice in early, so-called operable, carcinoma of the cervix. It avoids operation with the attendant suffering, invalidism, complications and high immediate mortality. Symptoms are promptly relieved and there results a higher percentage of cures than from surgery or any other method of treatment.

Henry Schmitz, while holding that a panhysterectomy is the only treatment indicated where the growth is clearly located—these commonly designated "operable cases"—believes that those cases which appear to be doubtfully located after a physical examination—the borderline cases—and operable cases rendering a poor surgical risk owing to complicating constitutional diseases, form the ideal group for radium therapy. He subjects to intensive radiation treatment all cases in which a

demonstrable invasion of the contiguous tissues and organs and regional lymph-nodes is found on physical examination—the clearly inoperable cases.

This brief review of the most recent literature clearly indicates how strongly the tide of medical opinion is set toward the increased use of radium and the gradual abandonment of surgery in treating cancer of the cervix. Prominent among these who have withstood this tide is William P. Graves, of Boston, who last year made an earnest protest against the widespread condemnation of surgery as a treatment for cervical cancer and has made a systematic effort "to establish the truth regarding these points." He finds that the variation in operability percentages given by different surgeons is very great. In general, the figures in this country are lower than those from abroad, especially in Germany. He has been forced to the conclusion that the estimate of operability depends to some extent on the individual judgment of the attending surgeon. In a general review of his work he does not feel the same degree of discouragement with regard to operative treatment as is expressed by some surgeons in recent literature. On the other hand radium in his hands, though it has been invaluable as a palliative, has proved disappointing as a curative agent, and he has not yet felt justified in substituting it for operation in favorable cases. He goes on, however, to compare his results from the use of radium with those of Bailey of the Memorial Hospital, and frankly admits that the New York man's results were far superior to his own "both as regards palliation and permanent curability." This superiority, he believes, must be ascribed to a greater knowledge and experience in the use of radium, to the possession of large quantities of the radium element, and to elaborate and efficient technique of application. It does not appear, then, that on the whole Graves has succeeded in making out a very convincing brief for surgery as preferable to radium.

In diagnosing cancer in any form the

most important point is a thorough physical examination. There has been a great deal of controversy concerning the wisdom of taking specimens from any growth suspected of malignancy, in order to obtain a microscopic examination. The discussion is still going on, and I do not feel competent to offer an opinion regarding it, other than to say that the course most generally advised is to prepare the patient for operation, obtain a frozen section and if the growth proves to be malignant, proceed at once to operate. When we propose to employ radium treatment the matter assumes a different aspect, for when no surgery is contemplated the danger of disseminating the cancerous cells looms even larger.

In treating cancer of the cervix with radium it is essential that one should be a good clinical diagnostician. The surgeon is frequently unable to get a positive tissue examination before he operates, but he has an advantage over the radiologist, in that after he removes the uterus he is able to get any and all tissues that may be involved, thus being able to recognize any existing malignancy. Of course one would like to have these pathological examinations even in radium treatment, for it is more scientific to have a definite report. But it is not best if such an examination is going to lessen the chance of a cure. Sometimes I am afraid that we forget the object of the patients when they come to us for an examination. Of course their object is to be cured of their ailments; in our scientific zeal we should never lose sight of this important thing.

For convenience we have divided our cases of cancer of the cervix into four groups:

Group 1. These are the operable cases, where the malignancy is confined to the cervix. The technic followed with this group is to give the patient 2,000 mg. hours, putting the radium in the cervix for one-half the time, and in the vagina for the remainder, packing the radium with gauze well up against the cervix. When the radium is applied to the cervix, the rectum should be thoroughly packed off

with gauze, otherwise an ulcer of the rectum may be produced, a very hard thing to cure. There is also danger of a recto-vaginal fistula. At the end of five or six weeks the patient returns for a repetition of the treatment.

Group 2. These are the cases that are inoperable; where the malignancy extends to the vaginal portion of the cervix. The uterus is movable and there is no apparent extension to adjacent organs. These cases are considered good radium cases, and it is here that radium does the most good, because no other agent can give the same results. In the past, our greatest trouble has been undertreating these patients. Such cases should have all the radium treatment they can stand. In my early experience I gave them at first from 1,200 to 1,500 mg. hours, and repeated in about six weeks and then treated them from time to time, according to indications, over a period of from six months to a year. I speak of this treatment only to condemn it, as we are using our radium in scar tissue which was a great help in choking out cancer cells. Our present technique is to treat these patients in the same way as described for Group 1, except that we give them from 2,000 to 3,000 mg. hours, at each treatment.

Group 3. These are the cases where the broad ligaments, pelvis and glands are involved, and in these cases we endeavor only to relieve symptoms, such as hemorrhage, foul discharge and pain. The hemorrhages are controlled in about 90 per cent, and foul discharge is improved in about 50 per cent, but the controlling of pain is somewhat disappointing, and only a few of these advanced cases are benefited.

Group 4. These are the cases having recurrences after operation. This group also includes those treated immediately after operation to prevent recurrence.

From 1916 to 1921, we have treated 126 cases for cancer of the cervix. Those cases treated in 1921 and 1922 are omitted because they are too recent to be of any val-

ue to this report. The cases are grouped as follows:

Group 1. Good operable cases:

1916 Number cases treated.....	2	Living 1922.....	2
1917 Number cases treated.....	4	Living 1922.....	4
1918 Number cases treated.....	2	Living 1922.....	2
1919 Number cases treated.....	2	Living 1922.....	2

Total No. cases treated.....10 Total No. living.....10

Group 1. (A) Consists of cases in which we were unable to get a positive tissue examination, but where all patients had had discharge, some had hemorrhages, and all presented clinical symptoms similar to those mentioned above. These cases received local treatment, but were not benefited and surgery would have been necessary if radium had not been used.

1916 Number cases treated.....	1	Living 1922.....	1
1919 Number cases treated.....	None	Living 1922.....	None
1918 Number cases treated.....	3	Living 1922.....	3
1920 Number cases treated.....	2	Living 1922.....	2

Total No. cases treated.....8 Total No. living.....8

Group 2. Inoperable or border-line cases:

1916 Number cases treated.....	4	Living 1922.....	1
1917 Number cases treated.....	6	Living 1922.....	3
1918 Number cases treated.....	8	Living 1922.....	4
1919 Number cases treated.....	10	Living 1922.....	6
1920 Number cases treated.....	15	Living 1922.....	12

Total No. cases treated.....43 Total No. living.....26

Group 3. Hopeless as far as a cure is concerned, and treated symptomatically:

1916 Number cases treated.....	6	Living 1922.....	None
1917 Number cases treated.....	10	Living 1922.....	None
1918 Number cases treated.....	12	Living 1922.....	None
1920 Number cases treated.....	15	Living 1922.....	4

Total No. cases treated.....58 Total No. living.....4

Group 4. Recurrence after operations:

1916 Number cases treated.....	1	Living 1922.....	None
1917 Number cases treated.....	1	Living 1922.....	1
1918 Number cases treated.....	2	Living 1922.....	None
1919 Number cases treated.....	1	Living 1922.....	1
1920 Number cases treated.....	None	Living 1922.....	None

Total No. cases treated.....5 Total No. living.....2

Two cases were treated two weeks after operation; one in 1917 was still living in 1922, and one treated in 1919 is now dead.

Total number cases treated, 126. Total number cases living, 51.

Patients Dying in Group 2, 3, 4, and 4-A.

Group 2. Three lived 1¼ years, two lived 2½ years, six lived 3¼ years, three lived 3½ years and three lived four years.

Group 3. Six lived one to three months; ten lived three to six months; twelve lived six months to one year; fifteen lived one year to one and one-half years; eleven lived one year to one and three-fourths years. The four now living are in bad shape and will die in the near future.

Group 4. One lived two months; one

lived one year, and one lived fifteen months.

Group 4-A. The one who finally died lived for two years.

In Group 1, none had had a recurrence up to January 1, 1922.

I must confess that the grouping of these cases is a very difficult task since there can be greater extension in the pelvis and adjacent organs than one might think possible. For instance, some cases as those in Group 2, where the uterus was movable, and no involvement was apparent except that of the cervix and the vagina, I am quite sure should really have been placed in Group 3.

In reviewing this report, the percentage of cures in the inoperable cases appears low, putting Group 2 and Group 3 together, but Group 3 is to the radium operator what Group 2 would be to the surgeon, and the lives of twenty-six patients out of forty-three who are living, I feel have been saved to this date by radium. I do not claim that these cases will not at some time, have a recurrence but I do know that they all would have been dead had they not been treated with radium, and none had had a recurrence up to January, 1922.

The question may be asked, "Should the operable cases have been treated by surgery?" As we have seen some men who are surgeons and doing radium work, have yielded in favor of radium, and others are almost persuaded that radium is better than surgery. Those who claim that surgery should be done on all cases that are operable, and radium used on all cases that are inoperable, have never explained why it is better to use surgery on the operable cases instead of radium. We see that in Group 2, radium had done something for these patients that surgery could not do; it destroyed several times as much pathology as was presented by the cases in Group 1. Therefore I see no reason why radium should not do still better where the pathology is so much less.

In conclusion let us consider the patient's point of view. With radium she is in the hospital less than a week, there is

absolutely no mortality from its use; and practically no pain or discomfort to the patient. She does not have to go through a period of anxiety and worry, she does not dread to come for examination fearing something may be done that might prove fatal. For these reasons we are more likely to see the patient early in the disease than when the matter must be considered from a surgical standpoint.

When surgery is employed, with a mortality of eighteen to twenty per cent, the prospect of three weeks in the hospital, together with the pain and discomfort following operation and with the possibility of a recurrence; to say nothing of all extra hospital expenses connected with it, it is not surprising that patients will readily submit to radium treatment, who could not be persuaded by any considerations to undergo a surgical operation.

The conclusions which I have drawn from the preceding study are:

1. That despite the conservative attitude still maintained by those employing it, radium has already been proved to be a highly valuable agent for the control and cure of cervical cancer.

2. That the balance of opinion among those best qualified to judge tends toward the use of radium instead of surgery upon those early cases which are regarded as suitable for operation.

3. That my own experience confirms the reports of others employing radium in the treatment of cervical cancer, and I am convinced that many of my patients who are now alive and doing well, would never have survived, had I employed any of the other known forms of treatment.

4. Radium not only offers the greatest help to the woman suffering from cancer of the cervix, but it proves less terrifying and more acceptable, a most important factor in favor of those who are struggling to stamp out this terrible disease.

Hurt Building.

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TREATMENT OF LEUKEMIA BY MEANS OF THE X-RAY.*

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The application of the term leukemia and the case reports which are included in this paper have purposely been limited to the myelogenous and lymphatic forms of the disease which are characterized by typical blood findings. This was considered advisable on account of the unquestionable factor of a correct diagnosis and on account of having a definite guide to govern the extensiveness demanded in reference to the application of treatment.

The clinical manifestations of myelogenous leukemia, briefly stated, include weakness, splenic tumor, secondary anemia, dyspnea, loss of weight and frequently pain in the left hypochondriac region. The blood findings show a great increase in the total leukocyte count but the differential count may be practically normal except that we find the presence of myelocytes.

Lymphatic leukemia is characterized clinically by enlargement of the lymphatic glands, especially the cervical and axillary groups, fever, weakness, hemorrhages from the mucous membranes of the nose, mouth or gastro-intestinal tract, anemia and dyspnea. The blood findings show a great increase in the total leukocyte count and the differential count shows this increase to be due largely to an increase of the large and small lymphocytes. It is stated by some hematologists that the large lymphocytes predominate in the acute form of the disease while the small lymphocytes predominate in chronic lymphatic leukemia.

Since the types of leukemia considered in this paper show the study of the leukocytes of the blood to be the outstanding differential point in the diagnosis of these

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diseases and since a close observation of the differential count in myelogenous leukemia following x-ray treatment of a limited number of patients seems to be of some confirmative value in reference to one of the theories of the physiology of the leukocytes, it may be interesting to state these theories. There is considerable variation of opinion in regard to the origin of the various forms of white cells. In general it may be said that these views fall under two heads. First, the dualistic theory teaches that there are two sources of origin for these cells, the lymphoblasts of the lymph nodes which give rise to the small lymphocytes and the myeloblasts of the bone marrow which give rise to the granular leucocytes of the blood. Second, the unitarian theory teaches that all of the white blood corpuscles originate from a single form of parent cell which has the characteristics of a large or small lymphocyte. (Howell.)

The management of leukemia which has an unknown cause but a distinctly fatal termination, is very unsatisfactory, regardless of the method of treatment employed. However, patient's afflicted with incurable diseases are entitled to receive our deepest study so that the plan of treatment selected in their cases may be that which will afford them the longest period of life, the most usefulness to their families and community, and the maximum period of comfort. That the treatment of the leukemias by means of the x-ray and radium, preferable the x-ray, fills these demands far better than any drug known to us at the present time, I don't think can be questioned by any physician who knows anything about the results accomplished by radiation therapy in the treatment of leukemia.

Extensive experimentation has been done by Capps and Smith and Melchener and Wolff to determine what took place in the spleen and blood following radiation. Capps and Smith found that in addition to the destruction of the cells of the lymphoid tissues, spleen and bone marrow, there was produced in the serum of leuke-

mic patients leucolytic substances which have the power of destroying leukocytes. These investigators discovered that the serum of leukemic patients under x-ray treatment when injected into other leukemic patients caused a decided drop in the total leukocyte count. On the other hand, the serum of untreated patients produced an increase in the white cell count.

Melchener and Wolff in their experiments on the causation of leukemia found that healthy animals injected with the serum made from a spleen which had been subjected to radiation, exhibited a marked reduction in the total number of leukocytes, while an injection of serum made from a spleen that had not been irradiated produced leucocytosis. Thus it would seem that the benefit derived from radiation in leukemia is not alone due to a destructive action on the blood cells and blood forming organs, but to certain leucolytic substances that are in some way produced by the treatment.

The forms of treatment that have been thoroughly tried out in leukemia include surgical treatment or splenectomy, medical treatment which consisted in the administration of arsenic and benzol and radiation treatment by means of radium or x-ray. Pearce, Krumbhaar and Frazier state that on account of the high postoperative mortality and of the evidence that the course of the disease is not affected by the operation it is safe to say that splenectomy is definitely contraindicated in the various forms of leukemia. Medical authorities state that arsenic and benzol are of value in the treatment of leukemia often bringing about symptomatic and hemological recovery, but ten months after the cessation of treatment is the period of continuous health. Since the surgical and medical treatment of these patients promise so little it is certainly advisable to pursue any plan of treatment that will afford more relief to this class of patients. The technique of radiation treatment of leukemia necessarily varies according to the blood findings that are present when the patient reports for examination and

treatment. The following technique will apply to the majority of leukemic patients. Exposure of four areas, nine by fifteen centimeters, over the anterior surface of the spleen, the liver and the pancreas for the first sitting; four areas over the lateral aspect of the spleen for the second sitting and four areas of the same size over the posterior aspect of the spleen for the third sitting, after which a period of three weeks should elapse before further treatments are considered advisable. At the end of this period if the splenic tumor has not receded to or above the costal margin or if the blood count has not approached normal it is advisable to have the patient take an additional treatment over the same areas and also include exposures over the long bones if the percentage of myelocytes has not been eliminated. The treatment over the areas suggested are given according to the following formula: Two millimeters of aluminum as filters, nine inch spark gap, five milliamperes of current, a ten inch skin target distance and an exposure time of six minutes.

The reasons for adopting this plan of treatment are due to the fact that it does not produce a sclerosis of the spleen or a destruction of the red blood corpuscles. Patients who show a grave secondary anemia and an extremely high leucocyte count should have a limited area of skin surface treated at each sitting on account of the reaction following the treatment. The management and treatment of all cases of leukemia should be governed entirely by the blood picture which ordinarily reaches the maximum decrease in the number of leucocytes per cubic millimeter at the end of three weeks. It is also advisable to continue treatments until the spleen has diminished in size so that it is not palpable below the costal arch, regardless of the white cell count.

The same general plan of treatment is carried out in lymphatic leukemia as that described in myelogenous leukemia, except that the areas treated involve all the palpable lymphatic glands as well as the mediastinal and mesenteric glands. Radiation

treatment does not offer a favorable prognosis or comfort to the patient in acute lymphatic leukemia unless the treatment helps to convert the case from the acute to the chronic form of disease.

Report of Cases:

Patient No. 1: Y. M. Male. White. Age 18. Occupation, farmer. Physical examination negative except for the presence of palpable lymphatic glands in the cervical and axillary regions and evidence of anemia. The following blood picture was found at the time the patient reported for examination, April 15, 1920: Red cell count, 3,800,000; hemoglobin, 60 per cent; white cell count, 64,000; differential count, polynuclears 8 per cent, small lymphocytes 90 per cent, and eosinophiles 2 per cent. Diagnosis: Acute lymphatic leukemia. X-ray treatment was given over the cervical, axillary, mediastinal, splenic and mesenteric regions. The blood count on May 1st showed 54,600 white cells with 8 per cent polynuclears and 92 per cent small lymphocytes. The patient died May the second.

Patient No. 2: F. S. Male, White. Age 7. Patient was referred for examination on account of enlarged cervical, axillary, and inguinal glands. Blood examination showed white cells 98,000 with 47 per cent large lymphocytes, 43 per cent small lymphocytes, 4 per cent transitionals and 6 per cent polynuclears. Diagnosis: Acute lymphatic leukemia. Three weeks following x-ray treatment over the mediastinal, mesenteric, and regions of palpable glandular enlargement, the blood count showed 6,200 white cells with 37 per cent large lymphocytes, 33 per cent small lymphocytes, 4 per cent transitionals and 36 per cent polynuclears. The blood picture was kept within the bounds of normal for a period of about sixty days when the white cell count began to increase very rapidly and the patient soon died.

Patient No. 3: Mrs. W. C. R. Female. White. Age 60. Occupation, housewife. Patient referred April 28, 1921, for tumor in left side, which had been diagnosed as sarcoma of the left kidney. Blood examina-

tion showed white cells, 400,000; red cells, 2,900,000; hemoglobin 55 per cent, and a differential count of polynuclears 55 per cent; large lymphocytes, 1 per cent; myelocytes, 30 per cent. Diagnosis: Myelogenous leukemia. X-ray treatment over the anterior, lateral and posterior surfaces of the spleen and long bones was started on April 28th and completed on May 4th. May 25th the blood count showed white cells 6,400; polynuclears, 60 per cent; large lymphocytes, 10 per cent; small lymphocytes, 19 per cent; eosinophiles, 5 per cent, and myelocytes 6 per cent. The blood count has remained practically normal up to the present time without additional treatments.

Patient No. 4: J. C. B: Male. White. Age 33. Occupation, salesman. Patient reported for treatment June 3, 1918, with a diagnosis of myelogenous leukemia. He has been treated by means of the x-ray for a period of three years. Blood count at this time showed white cells, 152,000, with a differential count of 62 per cent polynuclears; 25 per cent large lymphocytes, 12 per cent small lymphocytes; transitionals, 1 per cent. Three weeks following x-ray treatment over spleen and long bones the white cell count was 18,000. The blood count was kept within normal bounds for a period of about two years when the patient was urged by the firm that he represented to go to Baltimore and be treated with radium. The patient died in about three months.

Patient No. 5: G. B. M: White. Male. Age 51. Incapacitated for any kind of occupation on account of weakness, anemia, and tumor in left side. Blood examination showed red cells, 2,650,000; hemoglobin, 39 per cent; white cells, 175,000; with a differential count of polynuclears, 55 per cent; large lymphocytes, 6 per cent; small lymphocytes, 12 per cent; myelocytes, 27 per cent. Diagnosis: Myelogenous leukemia. Three weeks after x-ray treatment over the spleen and long bones the blood count showed white cells, 5,800, with 70 per cent polynuclears; 10 per cent large lymphocytes, 20 per cent small lymphocytes.

Three weeks later the red cell count was 3,280,000; hemoglobin, 65 per cent; white cells, 5,200; polynuclears, 65 per cent; large lymphocytes, 27 per cent; small lymphocytes, 7 per cent and transitionals, 1 per cent. The blood picture has remained normal since June, 1920, by giving x-ray treatments at intervals of two to four months, and the patient is in the mercantile business at the present time.

Observation of the blood findings in myelogenous leukemia shows that the percentage of myelocytes is not appreciably reduced by radiation unless the treatment is applied over the shafts of the long bones. This would indicate that the dualistic theory of the origin of leucocytes is correct.

Conclusions:

I. Blood counts are absolutely necessary in the diagnosis and indications of therapy in leukemia.

II. Surgical procedures in leukemia are contraindicated.

III. Medical treatment is of temporary benefit.

IV. Radiation therapy produces beneficial results by a direct destructive action on the blood cells and by forming leucolytic substances in the blood stream which have the power of lowering the white cell count.

V. Since the percentage of myelocytes does not seem to be reduced unless treatment is applied over the shafts of the long bones, it would seem that the dualistic theory of the origin of leucocytes is correct.

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A REVIEW OF SIX MONTHS' EXPERIENCE WITH RADIUM.*

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As the title of my paper would indicate, I cannot report any permanent results from the use of radium but wish to call your attention to some of the immediate effects it produces, and to state a few of

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the lessons learned from my limited experience with it.

In the first place, I have found that, usually, far better results are obtained by imbedding the radium directly into a malignant growth, than can be gotten by "shooting" through the skin as in x-ray work. Russell H. Boggs, of Pittsburgh, Pennsylvania, was one of the first men to call attention to this fact. He introduces very large amounts, especially in treating malignancies of the breast. For this purpose the needle applicator is preferable, with 10 mg. of radium element in each needle. Any number of these needles, which may be considered necessary, are introduced directly into the tissue, with an interval of about 1 cm. between them. To illustrate this statement, I will report the following cases:

Case 1. Mrs. S., widow, 68 years of age, was operated on about 2 years ago for cancer of left breast; the axilla was cleaned out, but the supra-clavicular glands were not removed. She returned in October, 1921, with a tender painful mass about 3 by 6 cm. in extent on upper anterior aspect of left chest, just above scar of previous operation. Also a gland in left side of neck about the size of a small marble. I imbedded the radium needles for 7 hours in the mass on chest wall. Then the radium properly screened was placed for 15 hours over the gland in neck. In six weeks the mass on chest wall had disappeared entirely, while the gland had remained stationary. In April of this year, the growth on chest wall shows no sign of returning, while the gland in neck has enlarged and is about twice the size at first examination. I now inserted the radium needles in this gland, but cannot report the result, as I have not seen the patient since.

Case 2. Mrs. A., married, age 48, came to me in December, 1921. She had a mass of enlarged lymphatic glands in the lower triangles of left side of neck. Her left breast had been removed for carcinoma about two years previous to this. I imbedded the radium needles for $9\frac{1}{2}$ hours in these glands with the result that in six

weeks they were gone entirely, also all pain, which before had been quite severe had ceased. There has been no recurrence to date.

Another conclusion I have reached, is that where radium and any surgical procedure are both to be used in treating any malignant condition, the radium should be used first, as the action of radium on cancer cells is such that, if they are too far removed to be killed outright by its rays, they become "sickened," so to speak, to such an extent that metastases and local recurrence are not nearly so apt to take place after the operation, where radium has been used pre-operative.

My usual procedure, in a case of this kind, is to irradiate the whole area thoroughly, then in about two weeks, do as radical removal as possible. As an illustration of a grievous error I made in a case of this kind by operating first, I will report the following case.

Mrs. N., married, multipara, age 45 years, was seen in October, 1921. She had a large cancerous mass in right breast adherent to chest wall, and just about ready to ulcerate. To prevent the breast breaking down, I decided to remove it and place radium in the operation wound. This was done a few days later. I also thoroughly irradiated the draining lymphatics. She made a wonderful operative recovery, and for a while seemed to be getting well. However, in about 4 or 5 months she began to fail. About this time also, a great number of minute nodules began to appear in and under the skin all over her body. She died on April 10, 1922, of general carcinomatosis. This result might have been different, had I used radium before operating.

My experience with radium so far in the treatment of cancer of the cervix, has about led me to the conclusion, not to do a hysterectomy for this condition again but to rely entirely on radium. Why? For the simple reason, that in the early stage of this condition, which is the only time when an operation holds out any hope for a permanent cure, radium will destroy the cancer just as effectively as a radical op-

eration, and without the danger and mutilation of the latter. Then in the later stages of this horrible malady no operation can offer any hope. Here, radium will stop the wasting hemorrhage and check the offensive discharge, thus making the last days of the patient far more comfortable. Then, too, in not a few of these late cases, it seems to effect a clinical cure.

I have used radium in about 20 cases of cancer of the cervix; in only one of these cases was the patient seen very early in the disease. She was treated in December, 1921, there have been no signs of cancer since. Another case which was seen by a thoroughly competent surgeon and considered by him to be inoperable, came to me in October, 1921. She had a cauliflower growth completely filling the vagina. Radium was applied, and in four weeks the growth was entirely gone, leaving an ulcer on the posterior lip of the cervix. I then inserted the bare needles into this ulcer, with the result, that in three weeks, it had entirely disappeared, leaving the cervix perfectly healthy. This patient has gained 30 pounds in weight, looks the picture of health, and has had no more symptoms to date.

In epithelioma of the skin surfaces radium seems to be specific. I have treated quite a number of these cases, and every one has disappeared quite rapidly, leaving no bad after effects.

In so-called hypertrophic endometritis attended by menorrhagia by a severe type, radium is just as effective as it is in epithelioma of skin surfaces. Here, we used to curet every 3 or 4 months and finally do a hysterectomy to effect a cure. Now one application of radium will accomplish the same result, and the effect seems to be permanent.

There are a number of other conditions in which I have used radium with the same measure of success as in the cases enumerated above such as acne vulgaris, keloid, lueoplakia, etc., but time will not permit their detailed report here.

THE X-RAY TREATMENT OF UTERINE HEMORRHAGE AND FIBROID TUMORS.*

A Review of the Literature and Report of Cases.

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The first cases of fibromyomata successfully treated with x-ray were published by Foveau De Courmelle in 1904. He created the term Radiotherapy for the new treatment. Later in the same year his results were confirmed by Deutch of Munich. He observed the following phenomena: A sensation of contraction in the uterus with shrinking of the tumor which increases with the repetition of treatments. Pain, if present, rapidly vanishes. Hemorrhage increases at the beginning, leaving the tumor improved after each period then gradually wear away. Fibroids with abundant hemorrhage for the first three weeks get progressively less and in five or six months cease all together. His conclusions were that the decreased menstrual period was due to atrophic retrogression of the ovaries. To produce this condition a variable number of sittings was given, of from five to fifteen minutes in patients 50 years old. Sometimes reduction of flow followed the first application, but in patients of 40 he obtained it only after five or six months with two exposures per week. In patients less than 40, eight to ten months were required to accomplish results, which were obtained without a dermatitis. He attributes this to the use of the aluminum filter which he was the first to use.

Urquhart Bartholomew in the Lancet in 1909 reports the treatment of a case of fibroid the size of a pigeon's egg in a woman of 37. This was located in the cervical canal. The treatment was carried out by Dr. Ironside Bruce with an 8-inch coil, 5 M.A. 4 to 6-inch gap in a water cooled tube, 10 minutes exposure on the perineal region. Total time 70 minutes. The results were most satisfactory. The tumor almost entirely disappeared and her subsequent

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periods instead of being accompanied by severe hemorrhage lasted only three days. A leukorrheal discharge was cured.

Guilleminot & Lacquerriere in 1910, in summarizing the work done up to that time say that despite the variation in technique and dosage to treat uterine fibromyomata by radiation with the greatest possible chance of success it is necessary that the ovaries and the fibroma itself should absorb the maximum dose compatible with the integrity of the interposed tissues. Parts of entry must be multiplied and filtered rays, very penetrating and harmless to the skin employed. He used 1 Mm. of aluminum and two ports of entry back and front directed through the ovarian region by a cone with weekly exposures. His conclusions are as follows: 1. X-rays often establish an improvement in fibromata. 2. This improvement is sometimes in the volume of the tumor, sometimes in the menorrhagic symptoms and sometimes in the subjective symptoms. 3. The diminution or suppression of the ovarian function is not absolutely connected with the modification of other symptoms. 4. Rays act unequally and variably on the tumor and on the ovaries. The selective action on each cannot be accurately estimated. 5. It is necessary to favor a technique sometimes imperfect and to take into account the size and situation of the tumor.

Bordier in the Archives of Radiology in 1911 goes into extensive detail regarding his technique. He places 39 as being the youngest age suitable for treatment and gives the interstitial fibroid as the most favorable type. His greatest success has been with those accompanied by the most copious hemorrhages. After the second cycle of treatment these have entirely and permanently disappeared. Moderate sized tumors are more easily cured than the large, although the latter are reduced. Hemorrhages of the menopause are easily cured after two or three cycles.

Harnisch in 1913 reported 31 cases of uterine myomata and hemorrhages of various kinds treated with x-rays. Four of

these were not cured, one of which proved to be an unrecognized case of cancer. The average number of treatments totaled 50 or 60. He says that even the largest tumors may be treated successfully if they are not too old. Pedunculated, softened or infected tumors should not be treated.

M. F. Raymat, of Barcelona, in 1917, reported the treatment of 38 cases with the following conclusions: 1. Deep Roentgen therapy is very satisfactory in the treatment of fibromyomata. 2. In some cases it is curative, in some simply palliative, in some a valuable adjunct to operation. 3. The chief effect of the rays is upon the Graffian Follicle zone of the ovary but more marked in some cases on the muscular or vascular tissue constituting the tumor and upon the uterine mucosa. 4. Care should be exercised in the dosage and every precaution taken to avoid injury to the normal structures. 5. Progress must be carefully followed and every modification observed. 6. Treatment is contra-indicated when pregnancy exists. 7. Treatment is indicated in women of 40 or more.

J. A. Corscaden in the A. M. A., June, 1918, states: In functional menorrhagia in women near the menopause radio-therapy is the method of choice, while in young women it should be used with caution. Fibromata shrink and the uterus ceases to bleed after intensive radio-therapy. Those tumors occurring in women to whom a menopause is acceptable are proper subjects for radio-therapy. If the pressure symptoms are not severe, if the mass is not rapidly growing or if it is not excessive in size. The menopause should be permanent, the presence of carcinoma should be excluded in women over 30 whether tumor is present or not. A dosage just short of the erythema should be given through as many ports as seem practical for the patient. There is considerable variation in the susceptibility of different individuals.

Kreutzmann in the American Journal of Obstetrics, 1919, makes a plea for more thorough co-operation between the surgeons and Roentgenologist. Their work is not antagonistic but should go hand in

hand. His opinion is that most cases not complicated by degenerative changes or extensive adnexial affections yield to x-ray treatment. Among such complications are calcareous degeneration, serious cysts and hemo-salpinx. A segregation of 25 per cent of all cases appears a reasonable estimate for operation. The vast majority of myomata seen were uncomplicated. The immaterial changes of the adnexa observed in many women operated on do not exclude the use of x-rays. He reports 200 cases successfully treated. The cure is obtained without loss of life or injury during treatment. He reports no colon bacillus infection of the kidneys, vesico-vaginal fistula, re-opening of the incision of mural abscess of the abdominal wall.

A. Beclere in the American Journal of Radiology in 1920 reports results in 400 cases classified as to age 24 per cent were 50 or more, 64 per cent between 40 and 49, 11.5 per cent between 30 and 39. Intra-pelvic fibroids were present in 15.5 per cent. Those with abdominal projections were 84 per cent. The predominant symptom was menorrhagia. A few had severe loss of blood requiring packing several times. The technique consisted of weekly treatments with multiple ports of entry, five minute exposures with 6 to 8 inch gap, 3 M. A. with 8 inch skin distance. Filters 3 to 5 Mm. of aluminum and a disc of wood under the cone. Measured by the Saberrud Noir pastille the dose given was $31\frac{1}{2}$ units. Most of the cases required 4 to 20 treatments but a few were given as many as 50. He says the only real danger in radio-therapy is radio-dermatitis which can be avoided by good technique and a certain amount of experience. All other dangers are imaginary. The effects noticed were the suppression of menstruation and reduction in the size of tumors. Suppression of the menses were almost constantly accompanied by the appearance of hot flashes which was the signal for stopping treatment. Suppression was generally permanent but in 48 cases was only temporary. Reduction in the size of the tumors was much more rapid and more marked than

that following the physiological menopause. It begins before the menopause is established and continues afterwards. He believes that the scope and indications for radio-therapy should be greatly enlarged.

L. Martindale in 1920 reports a study of 93 cases, 51 of which were opened on, 37 received intensive Roentgen therapy. Five were treated by hysterotomy after x-ray treatment. The author chose 39 per cent for x-ray but his operative findings showed that a larger proportion could have been treated with x-ray just as well. His technique was that of Gauss & Kroenig of Freiburg with 20 to 22 ports of entry and a total average dosage of 2971X units. His conclusions were that the x-ray is the method of selection in the treatment of all fibroids smaller than a 6 months pregnancy especially the interstitial type. It improves the patient's health without interfering with her usual mode of living. It does away with pressure symptoms. It eliminates the nervous shock of an abdominal operation. It brings about a climacteric involving less disturbance than the natural menopause. It is eminently successful and free from mortality.

Geo. F. Pfahler in the N. Y. S. Medical Journal 1920, reports his experience extending over 14 years as most satisfactory. He used x-rays entirely at first, but later used radium in addition. Tumors persisting after the menopause have been made to disappear and in one case he reports the disappearance of the tumor without stopping menstruation. Indications: 1. All cases of myomas in older women with advanced anemia. 2. Cases of elderly or young women with organic heart disease, diabetes, nephritis, marked lung disease or goitre with cardiac symptoms. 3. All patients beyond 40 where there is no contra-indication. 4. Cases of young women with small tumors not associated with inflammatory disease or hemorrhage. 5. Uterine hemorrhage not due to constitutional disturbance. 6. It should be seriously considered in all cases where the alternative is hysterectomy.

Contra-indications. 1. All cases in

which the tumor is pedunculated or may be excised without destroying the patient's reproductive powers. 2. Cases of fibroids which have undergone malignant degeneration or become gangrenous. In cases of malignancy operation should be followed by deep Roentgen therapy. 3. Fibroids associated with disease of the adnexa. Special indications for use of x-rays alone are unmarried women in whom there is some objection to the introduction of radium into the uterine cavity. Cases in which a tumor lies in front of, behind or entirely to one side of the uterus. Cases in which anesthesia is inadvisable. Radium is a valuable adjunct because it exerts its action more markedly where the Roentgen rays are weakest. On the other hand the x-ray affects the tumor higher in the abdomen. Radium gives only 2.6 per cent of the skin dose, while x-rays give 12.75 per cent at a depth of 10 Cm. or the proportion of surface radiation which reaches a depth of 10 Cm. is nearly five times as great with x-rays as when radium is employed.

J. E. Panneton, in the American Journal of Roentgenology, 1920, gives his conclusions from the treatment of 44 cases as follows: The treatment is most successful in uterine hemorrhage of non-infectious origin and in certain cases of painful menorrhagia or with a delayed menopause. In all these cases, the results obtained warrant the term cure or clinical cure provided the dose administered is considerably greater than that actually necessary to produce the menopause. Treatment of young women is more prolonged being in inverse proportion to the age of the patient. When thick filters are used, the action on the skin is practically nil.

I. W. Eden and L. Provis, in the Lancet in 1921, report 46 selected cases of fibroid and 30 cases of chronic metritis. Fibroids extending above the umbilicus were rare. The body of the uterus is explored to exclude malignancy. Only simple, uncomplicated cases were treated. The dosage is determined largely by the judgment of the operator, no absolutely accurate method being available at present. In 50 per cent

the menopause symptoms were slight or absent, in 1-8 moderate, in 3-8 severe. The majority of patients gained weight but there is no tendency to corpulence. At least one treatment should be given after amenorrhoea has been produced.

A. A. Matthews, North West Medical Journal 1921, in an article on surgery versus radium and x-ray in the treatment of uterine fibroids reports 100 consecutive hysterectomies, 56 of which were fibroids, with three deaths, two from operative shock 8 to 12 hours after operation, the third from suppression of urine.

I have been able to find mention of but one case in which malignancy developed in a uterus after x-ray treatment. This was reported by Geo. E. Shumaker in the Journal of the A. M. A., 1915. A case of sarcomatous degeneration of a fibroid five years hysterectomy. To this I will have to add one in my own experience.

Time will not permit of a more extensive review of the literature but reports from the Argentine and the far East indicate the universal attention this method of treatment has commanded.

In 1917 the author read a paper before the Chattahoochee Medical Society in which he reported the following cases. The ages of the patients varied from 18 to 65.

Uncomplicated menorrhagia: 13 cases, age 36 to 48.

Menopause with nervous dysmenorrhoea: 3 cases.

Hemorrhages complicated by fibroid: 10 cases, age 24 to 65.

Hemorrhage complicating tuberculosis: 1 case, age 30.

Pelvic malignancy inoperable, post operative, one of which was also treated by radium: 6 cases, age 18 to 48.

Induction of menopause for fecundity, 1 case, age 32.

Dysmenorrhoea with violent headaches, 1 case, age 31.

A case of large fibroid complicated by a cyst in which the patient preferred to give x-ray treatment a trial before surgery. Results were quite satisfactory. The fibroid practically disappeared and the pressure

symptoms were relieved. Several of these patients failed to take sufficient treatment, others died of malignant complications. Two of the malignant cases had no recurrence three years later. Twenty-four cases were considered cured or clinically cured. One of these patients subsequently had a hysterectomy for a condition reported non-malignant. The technique used in the treatment of these cases with the exception of the first three treated in 1914 with water cooled tube and fractional dose technique was as follows:

Coolidge tube—9 to 10-inch gap, 5 M. A. with between 4 and 5 ampere in the filament.

Filtration three to four Mm. of aluminum and sole leather. The abdomen below the umbilicus on each side of the midline is divided in 3 to 5 areas. This is done directly on the skin by means of a circular disc of sole leather which exactly fits the ampulla of the heavy metal treatment cone. Each area is then marked out with a skin pencil. The leather disc resting on one of the rings, the abdomen is covered with a heavy flannel pad, through which the disc may be felt. The cone is then brought down firmly on the disc which serves to localize the rays, compress the tissues and acts as a filter as well. The disc is then changed from area to area giving a 10X dose through each which takes 5 minutes as measured by the Hampson Radiometer. In this way 5 to 7 areas may be given on each gluteal sacral region, two perineal and one vaginal directly on the cervix through a special glass speculum. The round of these areas may be made safely once a week for three weeks but a 4th should not be given until two or three weeks have elapsed. A very large dosage may thus be concentrated on the internal organs without placing the surface areas in any danger. I have no fear of a slight erythema but never repeat a dose on an area which shows the slightest irritation as the effect of the rays is cumulative. The bronzing of the skin which follows the course of treatments, gradually fades away leaving the skin uninjured. Through the

treatment the patient is instructed to make daily application of a white lotion recommended years ago by Dr. Walton Dobb, of Boston, now one of the martyrs to the science of Roentgenology. This is composed of lime water, glycerine, zinc oxide and carbolic acid. It delays x-ray reaction. A certain amount of nausea and malaise occur in some cases within two to 24 hours after treatment especially after very heavy doses. This is very variable with different patients and in beginning treatment, an effort is made to divide the doses in such a way as to give her the least possible discomfort. There are differences of opinion as to the cause of this but it is probably the combination of an acidosis in the tissues, the breathing of an ironized atmosphere generated by the tube and the effect of the rays on the ovaries. We combat it by alkalinizing the patient with bicarbonate of soda, the best possible ventilation and lavender smelling salts. In very weak anemic patients too sick to be good operative risks, they stand one enormous dose very well, and where indicated, the dosage on the areas described above may be doubled without injury to the patient and may be all that is required. This was the case with one patient, who received a 240X dose at one treatment. This method should be used only in emergency as the menopause symptoms are apt to be more severe when the condition is suddenly produced. The average total dosage required to produce the menopause in cases uncomplicated by fibroid was from 400 to 700X units according to the age of the patient and the individual's susceptibility. The heaviest dose in the series of 24 cases was a large fibroid in a patient weighing 193 pounds with thick abdominal walls. She was given 1245X units. The smallest dose was 105X.

Later cases have been treated with higher voltage and more filtration: 10 to 10½ inch gap and 6 Mm. of aluminum. The same estimation of dosage is used for convenience. Severe menopause symptoms have been relieved by ovarian extract.

The following forty cases briefly report-

ed do not contain any case of known malignancy, being mostly referred by some of our leading gynecologists is sufficient guarantee for their selection.

In all but two, I can say without boasting that the results were good. In most of them it was all that could be desired. In some of the younger cases hemorrhage was checked without complete suppression.

Class A. Patients over 50. Three patients, two of whom had fibroids.

Class B. Patients 40-49. Twenty patients, of whom five had fibroids, two very large. One of which required hysterectomy. About a year and a half after treatment, a degenerated but non-malignant mass was removed. Another case of menorrhagia uncomplicated by tumor developed malignancy one year and nine months after treatment.

Class C. Patients 30 to 39. Ten patients, only two of whom had fibroids.

Class D. Patients 20 to 29. Five cases with one fibroid.

Class C. Patients under 20. Two cases of hemorrhage, 17 and 13 respectively.

Of the ten cases complicated by fibroids, all showed complete cure or marked improvement except one.

The advantages which this method may justly claim are as follows:

There is no serious interference with the patient's usual routine of life. There is no pain, anesthetic or hospitalization. No operative shock or mortality. No convalescence from operation. It is without danger when properly carried out, and eminently successful in properly selected cases.

Class A, 3 Cases; Patients 50 or Over.

Case 1. Unmarried, age 50. Large fibroid tumor filling the pelvis—can be felt above the pubis. Principal symptoms—Menorrhagia and pain. Treatments 10—Dosage 520X. Tumor almost disappeared, symptoms entirely relieved.

Case 2. Married—age 50. 3 children, 2 miscarriages. Retroversions chronic metritis. Symptoms—Menorrhagia-Nervous-

ness. Treatments 9—Dosage 330X. Patient well.

Case 3. Married—age 60. Two children. Tumor of questionable nature, size of an orange, posterior to uterus. Menopause 10 years previous. No hemorrhage. Symptoms—Soreness in pelvis—Organic heart trouble. Treatments 8—Dosage 530X. Patient doing well, tumor smaller.

Two cases of fibroid tumors. One hemorrhage.

Class B—20 Cases. Patients 40-49.

Case 4. Married—age 40. Five children, two miscarriages. One radium treatment for menorrhagia which stopped the flow for nine months, also cervical amputation. Condition—Chronic metritis with enlargement. Symptoms—Menorrhagia, pain and nervousness. Treatments 11. Dosage 995X. Flow entirely stopped. A very nervous menopause controlled by ovarian extract.

Case 5. Unmarried—age 40. Simple menorrhagia. Treatments 8—Dosage 365X. Patient is well.

Case 6. Married—Age 40. One child. Small pelvic myoma. Symptoms—Severe pain at menses, not excessive. Treatments 8. Dosage 275X. Pain entirely stopped with the menopause. Rather severe nervous, symptoms controlled by ovarian extract.

Case 7. Married—Age 40. Three children. Chronic metritis with severe prolonged hemorrhage. Too weak and anemic for operation. One treatment. Dosage 270X. Menopause established. Recovery complete.

Case 8. Married—Age 41. Two children. Fibroid tumor size of an apple posterior to uterus. Symptoms Menorrhagia. Treatments 10. Dosage 945 X. Hemorrhages stopped, tumor reduced considerably in size, symptomatically well.

Case 9. Married—Age 41. Four children. Chronic metritis with menorrhagia. Treatments 2. Dosage 210X. Patient is well.

Case 10. Married—Age 41. Menorrhagia and weakness. Treatments 5. Dosage about 400X.

Case 11. Married—Age 41. Four children. Fibroid on right side, palpable above pubis. Menorrhagia. Treatments 18. Dosage 830X. Hemorrhages have disappeared but tumor mass is only slightly reduced.

Case 12. Married—Age 42. Two children. Chronic metritis with menorrhagia. Amputation of cervix. Treatments 3. Dosage 200X. Patient is well.

Case 13. Married—Age 45. Four children. Large nodulas fibroid extending nearly to the umbilicus. Symptoms—Menorrhagia, pain and pressure symptoms. Treatments 15. Dosage 900X. Hemorrhage and pressure symptoms relieved, tumor reduced in size about one-third. Patient developed an arthritis about a year later. Operation, necrotic fibroid non-malignant.

Case 14. Married—Age 46. Three children. Operation for removal of small fibroids. Hemorrhage of menopause with chronic metritis and eroded cervix. Treatments 11. Dosage 740X. Hemorrhages stopped, eroded cervix healed.

Case 15. Married—Age 47. No children. A large symmetrical fibroid extending half way to umbilicus. Menorrhagia and metrorrhagia. Treatments B. Dosage 595X. Hemorrhages stopped. Tumor has almost disappeared.

Case 17. Married—Age 48. Seven children. Chronic metritis, lacerated cervix, menorrhagia. Very nervous. Treatments 11. Dosage 600X. Menopause established. Condition much improved.

Case 18. Married—Age 48. One child. Interstitial fibroid size of fist. Chronic metritis, painful menorrhagia. Treatments 5. Dosage 420X. Symptoms entirely relieved.

Case 19. Married—Age 49. Six children. Severe menorrhagia, very weak and anemic. Chronic metritis. Treatments 5. Dosage 570X. Patient entirely well.

Case 20. Married—Age 42. No children. Chronic metritis, menorrhagia and metrorrhagia. Treatments 3. Dosage 315X. Patient is well except for a rather nervous menopause.

Case 21. Married—Age 40. No children. Ruptured tubal pregnancy on right side.

No operation. Ill three months. Severe pre-menstrual pain beginning two weeks before period is established, spasmodic in character lasting 15 minutes at a time. Nothing but opiates gave relief. Treatments 8. Dosage 340X. Relief was complete and the menopause mild.

Case 22. Married—Age 40. Three children. Menorrhagia five years. Curettage four years ago. A slight but constant flow for four months. Somewhat enlarged boggy uterus. Chronic metritis. Treatments 14. Dosage 635X. Flow entirely stopped. Patient gained weight and was feeling fine. One year and nine months later, patient had discomfort in the lower abdomen. Examination showed advanced carcinoma of the cervix. Laparotomy without removal. Further combined x-ray and radium treatment failed to get results and patient went from bad to worse.

Case 23. Married—Age 47. One child. Hemorrhage of menopause. Chronic metritis, weak and anemic. Treatments 6. Dosage 280X. Flow entirely suppressed. Patient had high blood pressure and recovered her strength slowly.

20 cases, 5 cases of fibroid tumors.

Class C. 10 Cases. Patients 30-39.

Case 24. Married—Age 39. Menorrhagia fifteen years. Curetted twice. Chronic metritis and menorrhagia. Patient extremely nervous. Treatments 3. Dosage 105X. Diminished her flow for a year when it again became excessive. Treatments 7. Dosage 340X. Total 445X.

Case 25. Married—Age 36. One child. Heart trouble and rheumatism. Ovarian cyst removed fifteen years ago. Chronic metritis with menorrhagia. Weakness. Treatments 6. Dosage 495X. Menopause established. General condition much improved.

Case 26. Colored. Married—Age 39. No children. Curettage. Large fibroid tumor filling pelvis and extending to within two finger breadths of umbilicus. Some hemorrhage during past year. Menses stopped after five treatments. Further treatments were given to reduce the size of tumor. Treatments 17. Dosage 940X. Al-

most complete disappearance of tumor. Patient feeling well.

Case 27. Married—Age 39. Two children. Operation for uterine displacement and laceration. Treated for hemorrhage for five months (not x-ray). Chronic metritis with hemorrhage. Bleeding when first seen. Treatments 14. Dosage 695X. Patient is well.

Case 28. Married—Age 31. One child. Operations for removal of appendix and repair of perineum. Metritis with enlargement. Symptoms—Menorrhagia. Treatments 5. Dosage 290X. Periods much reduced but not entirely suppressed.

Case 29. Married—Age 31. Two children. Curettage for hemorrhage four months previous. Chronic metritis. Patient very anemic. After four treatments bleeding was replaced by a yellow discharge after which one more treatment was given. Dosage 370X. Menopause established.

Case 30. Unmarried—Age 37. Fibroid tumor on right anterior wall size of lemon. Symptoms—Menorrhagia. Treatments 10. Dosage 640X. Hemorrhages stopped, tumor has entirely disappeared. Some leukorrheal discharge which later cleared up. Mild menopause.

Case 31. Married—Age 31. Two children. Menorrhagia with anemia and nervousness. Treatments 3. Dosage 70X. Menses regulated but not stopped.

Case 32. Married—Age 36. Four children. Metrorrhagia for last nine years. Lately severe menorrhagia. Chronic metritis. Treatments. Dosage 550X. Complete suppression of menses with marked improvement in physical condition.

Case 33. Unmarried—Age 35. A history of dysmenorrhea. Operation ten years ago for cystic ovaries, suspension. Patient is very weak and nervous. Menorrhagia for past four months. Treatments 3. Dosage 170X. Menses suppressed with complete recovery of her health.

10 cases. 2 cases of fibroid tumors.

Class D. 5 Cases. Patients 20 to 29.

Case 34. Married—Age 25. One child. Suspension of uterus two years previous.

Menorrhagia for past two years. Chronic metritis. Treatments 4. Dosage 145X. Symptoms of cystitis after treatment. Examination of urine showed pus. Cleared up under treatment. Excessive flow stopped without complete suppression.

Case 35. Unmarried—Age 29. Operation two years ago. D. & C. removal of a small fibroid from right side of uterus, also appendix removed. A small fibroid size of a chestnut on posterior wall. Menorrhagia since operation. Treatments 6. Dosage 355X. Tumor much reduced. Menses much reduced.

Case 36. Married five years—Age 24. No children. D. & C. for dysmenorrhoea two years ago. Metrorrhagia since. Menorrhagia at the present time. Two treatments given to reduce flow. This was accomplished. Patient had normal periods for a year. She then began to bleed again. Three more treatments given with checking of flow. Treatments 5. Dosage 405X.

Case 37. Married—Age 26. One child, several miscarriages. Operation seven months previous for removal of tubes and right ovary, D. & C. and gall bladder drained. Menorrhagia, anemia and weakness. Chronic metritis with enlargement. Treatments 7. Dosage 475X. Recovery complete. Slightly nervous menopause.

Case 38. Unmarried—Age 28. Operation for appendix lying to back. Dysmenorrhoea and metrorrhagia. No enlargement of uterus. Treatments 6. Dosage 305X. Complete suppression. Nervous menopause relieved by ovarian extract.

Class E. 2 Cases. Patients Under 20.

Case 39. Unmarried—Age 17. Retarded mental development. Began to menstruate four months previously. Missed the third months. It was then induced by medication. This was followed by excessive flow which lasted for a month. Patient is very weak and anemic. Treatment given with a view of stopping the flow as promptly as possible. Treatments 4. Dosage 170X. Flow stopped and patient slowly recovered her strength.

Case 40. Unmarried—Age 13. A case of precocious development. Began to

menstruate at 11. D. & C. for menorrhagia two months ago. Boggy retroverted uterus bleeding at the time. Operation to be done for retroversion after checking of hemorrhage. Treatments 3. Dosage 175X. Excessive flow checked. Normal menstruation established, general condition good. Operation for retroversion successful.

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practice of medicine and surgery. Many of them have been martyrs to the cause, have sacrificed their vitality, lost use of their hands, or have received other irreparable damage to their bodies—but these misfortunes, as serious as they are, are but trifles compared to their achievements in the study and application of this most interesting science. Disguised in these horrible sacrifices there has come to us workers of the present day a well developed, powerful and potent therapeutic means which, to some afflicted, is an Angel of Mercy, to others, the savior of their life.

In what diseases do we get the best results from x-ray treatment and with what success do we meet? The latter greatly depends upon what stage the disease is in when we receive it for radiation treatment. Too often the cases come to us practically moribund after all other measures of treatment have been tried and failed. X-ray should not be considered the last resort for it has greatest value when the disease is young.

Yet, in many cases, even late, the x-ray has beneficial results. Many forms of glandular enlargements in whatever stage, except where pus has formed, can be relieved by the x-ray. Lymphosarcoma and Hodgkins' disease are examples of glandular involvements which readily and completely respond to proper radiation.

Malignant metastases often yield, though less readily, to persistent radiation unless too far advanced. Other glandular organs, spleen, pancreas, thyroid gland etc., when diseased, can very often be restored to a normal or near normal condition. For example, in spleno-myelogenous leukemia, a spleen which fills over half the abdomen will vanish beneath the costal margin, and a leucocyte count showing several hundred thousand myelocytes will come to or near the normal if properly treated with x-ray. By close clinical observation and blood examinations to guide future treatment a patient, once hopeless, can be given a long period of health and usefulness, and in some cases what appears to be a cure.

X-RAY TREATMENT.*

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Since the discovery of x-ray twenty-seven years ago there have been many energetic workers endeavoring to use the beam of the x-ray to advantage in the

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

A great majority of skin malignancies—rodent ulcers, epitheliomas, etc., are permanently cured by the x-ray; a hideous ulceration of years duration, not only making it embarrassing for the afflicted one to appear in the presence of others, but also sapping away the strength of his body, can be changed to a soft scar in a few weeks' time.

Many dry skin lesions—eczema, psoriasis, lichen planus, acne vulgaris, pruritis, syphilides, seborrhoea, leucoplakia, non-parasitic sycosis, neurodermititis, tuberculides, lupus vulgaris, ring worm, etc., respond to radiation.

Of the deeper lesions, neuritis, tuberculosis, pernicious anaemia, lymph-adenitis appear on the treatment list of some successful roentgenologists.

Conditions of the ovaries and uterus often give marvelous response to radiation; an ordinary menorrhagia or that due to fibroids is corrected and the fibroids disappear. Malignancies of the uterus and parametrium can be benefited. The palliative effects are worth the treatments in inoperable cases, and radiation combined with surgery in many cases will prevent metastases when it would most likely have taken place if surgery alone were used.

Prostatic hypertrophy, goitre, lymphomas, thymic hypertrophy, keloids, naevi, verrucae are successfully treated.

Malignancy of the breast can sometimes be controlled by x-ray alone, but it is better to combine it with surgery, giving x-ray before and after operation. Mediastinal involvements yield pleasingly to the rays, purely glandular conditions giving best response but malignant metastases are also often checked by sufficient radiation.

Hyperthyroidism, with or without enlargement of the gland, is corrected by x-ray alone in the selected case. Others may not be suited for x-ray alone, but in such cases the condition of patient can often be improved by the ray and thereby the operation is made safe.

There are many diseases in which the

combined use of x-ray and radium gives best results—radium for local effect and x-ray for general. Again in some cases both these remedies combined with surgery is the most potent method.

Cases under treatment must be kept under observation for a long, long while after apparently cured. The general practitioner and surgeon should co-operate with the roentgenologist in keeping close check on these patients; they should insist that they return for examination from time to time. Especially at the first hint of a possible recurrence of the disease treated they should consult the roentgenologist for advice as to further treatment.

Another point in the care of patients who come under the scope of x-ray that should be borne in mind by the doctor referring the case is that it often takes considerable time to make permanent improvement in very persistent cases; and that they must use patience and not advise other treatment for the case until consulting the roentgenologist who has been giving the x-ray treatment. I have seen cases steadily improving under x-ray changed over to other forms of treatment simply because the patients became tired of the treatment. If you advise x-ray and there is no professional reason to discontinue it and the patient just wills it be done, then you should hold the same attitude towards that which you do to their discontinuing your prescription or refusing operation which you think is the proper treatment.

We fully realize that in this as well as all other scientific methods there are imperfections; the science of x-ray therapy, though past the embryonic stage, has not yet reached the adult growth. At present longer strides are being taken in this specialty than in any other, and before many years have passed we hope to have cancer, one of the greatest menaces to the human race today, under control. Within the past year our American manufacturers and research workers have placed in the hands of expert specialists a very powerful high voltage x-ray machine, a similar one to

which has been used in Germany for several years with astonishingly good results in treating deep-seated malignancies. From our American clinics where these machines have been in use for several months we are receiving reports of, what is now thought to be, success, far superior to any ever attained in the past in the control of cancer. But we are not satisfied with that, the physicists are working harder today than ever before to produce tubes which will stand higher voltage than the present ones will and eventually, optimists think, there will be a ray so effective that the time required for treatment will be greatly diminished. With such a beam of rays which can be applied to large surfaces at sufficient distance to minimize the difference between skin and depth doses, cancer shall have been robbed of its greatest horrors.

For the present, may I suggest that the spirit of co-operation between the internist, surgeon, and the users of x-ray and radium be encouraged and, consulting one another, decide which is the best treatment for the individual case under discussion. When this has been accomplished, there shall have begun a new era in the treatment of many diseases; and with the introduction of more powerful rays in well trained hands, surely we see the "Crimson Dawn" of a bright future.

DISCUSSION OF PAPERS ON X-RAY AND RADIUM THERAPY.

Dr. J. J. Clark, Atlanta:

I feel that radiation therapy is being placed upon very sound ground, and that the surgeons are beginning to realize how much radium and x-ray are worth to them. Last year I read a paper before the association on the combined action of x-ray and radium. Many men seem to have the idea that there is antagonism between the use of the two agents. That is contrary to what is true. Each has its distinct and proper place for application. Radium is especially valuable where you can get direct action of the radium on a tumor or in a tumor. As a means of penetrating depth, radium is not as satisfactory as x-ray, and in that type of case the x-ray comes into use, not to displace the radium but merely as an aid to it. If the growth is near the surface, radium may come as an aid to x-ray. We see that so often in carcinomas and epitheliomas that metastasize. In those cases you have to use both agents, the radium locally and the x-ray for depth and distance. We know that without using enormous quantities of radium, or else using radiation in needles, the radium does not reach very deep. In those cases we use the x-ray. I have seen cases in my own office in Atlanta which have had radium and have had x-ray, which did not respond. But by the combination of both treatments they respond very nicely.

Many men have been given the idea that radium and x-ray will cure, but they are not cures any more than medicine is a cure. The idea is to help the patients, keep them alive as long as we can, and keep them comfortable and in some cases actually obtain an apparent cure. What we hope for is a prolongation of life and comfort. If the patient dies, it is not a black eye for either treatment.

The comparison is, how long would he have lived without the treatment?

Another thing brought up is the proper dosage. We have all been trained in the proper dosage with medicine. If a man came in and told you that a grain of morphine is a proper dose, you would say that he is ignorant of therapeutic dosage. The same thing applies to radium or x-ray. Patients come in with carcinoma of the breast, of the uterus, etc., that has metastasized. They say that they have been x-rayed. The big thing is the proper application of the massive dose. There is no use in trying to treat carcinoma or any malignancy without giving a dose large enough to produce a lethal effect on the carcinomatous tissue. Unless a doctor is willing to put in enough time and study to understand the agent he is working with, he is not competent to practice radion therapy.

In carcinoma of the breast today, many surgeons realize that the patients need preparatory treatment, which means treatment of the metastases before operation—to attempt sealing off of the lymphatics and to try and prevent operative metastases. This should be done at least three weeks previous to operation. And follow operation with thorough radiation to chest wall, axilla, etc.

Dr. Arch Elkin, Atlanta:

I am very glad that Dr. Clark discussed this paper, because his remarks lead me to believe that all x-ray and radium men are not enthusiasts. It is very easy to become enthusiastic, and I fear that many x-ray and radium men have become too enthusiastic. It is very easy to stand in a halo of enthusiastic glow, particularly when it refers to a disease that has been fought and re-fought for hundreds of years, as has cancer. The only objection to any line of work is the fact that an enthusiast must necessarily and does necessarily become arbitrary, because of his enthusiasm, and he believes definitely that a certain thing will happen if he uses a definite line of treatment.

My purpose in discussing this is to call attention to the fact that radium and x-ray have certainly a definite part and a definite place in medicine and in the therapeutics of medicine, but of the enthusiasm of the men who are working with these agents runs away to the extent that their spirit is so arbitrary that everything else goes into the background, then radium and x-ray will lose the value they should have. I was in this room eight years ago when a man said that by looking at a plate he could tell if a man had incipient tuberculosis. Of course he could not do it, and he knows it today.

Dr. B. H. Wagnon, Atlanta:

I am glad that the x-ray and radium people left out lacerated peritoneum and hernia. They came pretty near leaving the surgeon just flat. If we were to find out that they can accomplish what they think they can, we would better all start and get some radium and an x-ray. I am speaking from the standpoint of surgery, and I do not want to antagonize the x-ray and radium men, because I believe that both have a definite place in surgery. At the same time, I feel that they are adjuncts to surgery and not a primary surgical proposition to begin with.

Dr. Hall, closing the discussion:

I appreciate the discussion by Dr. Elkin, who warned us about becoming over-enthusiastic on this subject. I feel that the radium men as a whole and also the x-ray men have been conservative in their views in regard to this line of work. This is the first time in six years that I have advocated the use of radium in the treatment of operable cases of cancer of the cervix. I felt that the most important thing was time, and that it would take time to see what the results would be.

Statistics show that surgery has been unsatisfactory in treatment of cancer of the cervix. Janeway, in his article in 1919, made a very thorough investigation of the cases treated with radium compared with surgery. A report from some of the leading clinics showed something like two thousand patients operated on, and that there was a very small percentage living at the end of five years, and there was a mortality from surgery of over nineteen per cent. With radium and x-ray, we have practically no mortality from its use, and if we do nothing more than save the same number of patients that surgery would, there is an advantage over surgery.

Dr. Landham, closing the discussion:

I have nothing to say in the way of discussion except in regard to the reference made by Dr. Elkin concerning the dosage of x-ray or radium. That has been determined by results. I heard Dr. Elkin say a year or two ago that he was given Lugol's solution in dram and dram and a half doses. Why does he do that? Because experience taught him that it was better than ten drops. We do not give the same dosage of x-ray in all cases. In my paper I suggested an exposure of six minutes with a filtration of two millimeters of aluminum. That would certainly not be enough for malignancy. So the dosage is determined by the experience that you have gained by employing certain dosages.

Dr. Cooke, closing the discussion:

I want to thank Dr. Hall for his paper. As I said at the outset of my short paper, I have not been using radium.

long enough to report any permanent results. As some of you know, my business is surgery, and I have been operating upon all of these cases of cancer of the cervix that were at all operable, but even in the early cases that I have had in the past, my results were so uniformly bad that I was almost a pessimist in these cases. I had almost come to the conclusion, before I got radium, that I would quit operating on them anyhow, for I had so few that lived any time. Unless results from radium make me change my mind in the future I shall not operate on cancer of the cervix, no matter how easily I get the case. In cases where there were metastases into the broad ligaments, I boldly introduced the needles into the broad ligaments, disregarding the arteries and the ———, except that I introduced my finger into the rectum as a guide. In the later cases of cancer of the Uterus we all know that nothing will do any good.

Dr. Derr, closing the discussion:

Dr. Hall claimed that radium can be used in even inoperable cases of cancer of the cervix, and he has figures to back him up from some of the largest clinics of Europe.

In the treatment of myeloid leukemias, I find that the patient gets a little less anæmieu if the long bones are treated first, before the spleen is treated. In these cases the best we can do to prolong life, and we can do that. Every case that I have treated so far has died. I have one little boy about ten years old whom I have been treating for over two years. The spleen becomes enlarged, and goes down under treatment, and the blood count goes down. He has somewhat improved, but in the end will finally fail to react to the x-ray treatment. I feel that the hope lies in the modern method of heavy filtration, high voltage, and long exposure. We should feel encouraged, if not flattered, that one internist and a surgeon have admitted that x-ray and radium have a place in medicine and surgery.

Dr. Jenkins, closing the discussion:

Speaking of enthusiasm in x-ray and radium treatment, I think that if there is any evidence of it is in these papers—and evidently there is—it is due to the direct results obtained up to this time from their use. As to enthusiasm, I think that is an asset to any progressive science. I question any statement that indicates that we are over-enthusiastic. Everything that we have said, I think, can be backed up by actual case reports.

CANCER OF THE LIP; ITS TREATMENT BY RADIUM AND SURGERY COMBINED.*

C. K. Wall, M. D.
Thomasville, Ga.

In cancer of the lip the writer thinks he has a subject that is of interest to everyone present, whether one's leaning towards medicine, surgery or any of the other specialties. Every week, or I might say, almost every day we see the victims of this filthy and usually preventable disease walking the streets. It would seem that with a condition so easily and so readily recognized as being the positive forerunner of much suffering; at first so easily treated and cured, that the profession first and then the laity would have learned not to allow lip sores and ulcers to remain untreated or insufficiently treated. It is not the intention of the writer to arraign the profession for neglect of this class of cases, but rather to enter a plea for earlier recognition and the institution of treatment along proper lines. Otherwise we

unwittingly allow these patients to fall into the hands of the ever-present charlatans and "cancer doctors" with their variety of so-called cures.

Radiologists see the worst of the wrecks wrought by cancer of the lip, those that come up at the last moment for miracles to be performed. It seems all the more pitiful since we know that every case was at first a small spot that could have been cured with a minimum of treatment. Still more often do we see cases that have been fanned into activity by repeated applications of silver nitrate and other caustic agents. Still others come with the jagged tooth still sticking in the cancerous ulcer. All this, to say nothing of that large majority of cases that come to us after repeated trips to the "Paste Doctor."

The sufferer from lip cancer seems to be the most imposed upon of any class of patients. At first he thinks his is only a trivial ulcer or a scaly spot and will heal of its own accord after a while. In from three to six months he begins to get uneasy and may consult a physician, but more often he goes to some neighborhood quack that has produced a reputation of sorts as a cancer doctor by the application of some mysterious paste the formula of which has been handed down to him by his father and his father's father, etc. This paste, usually consisting of zinc chloride or one of the arsenic preparations, he applies with a maximum of pain to the patient who is thereby all the more impressed. He figures that if the amount of pain caused has anything to do with the cure, he certainly ought to get well. The occasional case will be cured by this treatment and that patient will be a walking advertisement for the quack. But the poor devil that has gone through with this ordeal and has his cancer made worse is ashamed of himself and keeps his mouth shut. Eventually he comes around for radium treatment and gives this hard luck tale of how much money he has spent on his lip; he's broke and his lip is getting worse every day. We see some exceptions to this rule, but not as many as we might

*Read before the Second District Society, Moultrie, Ga., August 11, 1922.

like. By the time these patients get to us many of them already have had the lymph glands on one or both sides pretty well infiltrated and are grabbing at straws.

We have probably not paid enough attention to distinguishing between epidermoid and basal celled cancer of the lip, but we realize the worst that may happen in any case and we treat every case with that idea in mind. The writer agrees most heartily with Dr. H. K. Pancoast who in a recent article on cancer of the lip says in part: "Theoretically, cancer of the lip should be readily cured by surgery because the primary and metastatic lesion are both easily accessible. This is not the case practically, mainly because surgery does not always remove all the cancer, and a large number of cases are not seen sufficiently early. Surgical results would be ideal if some means of education could be found to inculcate into the mind of every individual that every ulcer, fissure or keratosis of the lip persisting for several weeks, especially if showing induration and syphilis can be excluded, that such an area is either cancerous or potentially cancerous and should be removed. The vast majority of lip cancers have gone beyond that stage when we first see them. The general run of cases as we see them can be divided into three groups from the standpoint of methods of treatment, prognosis and statistics as follows: primary lesions without any evidence of metastasis, cases presenting small palpable nodes in the submental or submaxillary triangles; and those with advanced primary lesions and large palpable nodes in these areas or in other gland groups. The greatest danger from cancer of the lip is metastasis, which if it has occurred, increases the death rate very considerably. In view of the frequent metastases, every one who treats such cases should have an intimate knowledge of the lymphatics draining the lip. Lymph vessels pass directly down from the glands to the glands in the submental triangle, and from the lateral portion downward to the submaxillary triangle. The salivary glands are well supplied with lymphatics. If there is blockage on

one side from cancer or some inflammatory process, the free anastomosis with the lymphatics of the opposite side readily permits metastasis to pass from one side to the other."

In the first group radium alone has given us excellent results. The technique in this group of simple primary lesions without any palpable nodes in the neck is as follows: Under local anesthesia two radium needles of twelve and one half milligrams each are buried in the lip for eight to twelve hours. These are placed just under growth. Next we make a surface application over each submaxillary and submental triangle with fifty mg. of radium for twelve hours, using light silver and brass screening with one mm of gum rubber and about one-half inch distance taken up by gauze. In all a total of about eighteen hundred milligram hours are given at first treatment. This is usually enough and no further radiation is necessary, but the patient is told to come back at the end of two weeks for observation. We aim here at a severe reaction and our experience has been that large initial doses of radium, although complained of on account of the reaction by some, give better results than small doses repeated. At the end of the first two weeks the patient is at the worst of the reaction and he is asked to return at the end of a month, then at periods of two months till discharged.

The second group, those cases that present small palpable nodes under the jaw, have not yielded to radium alone nearly so well as the first group. The writer recalls two cases in particular with early metastases into the submaxillary glands who refused operation but were given large doses of radium both surface and buried needles. They came rather close together and acted very much alike. At the end of six months both looked like perfect cures. At the end of a year one returned for treatment of a recurrence and still refused operation. Radiation seemed to make the disease spread more rapidly and the patient died in about ten months. The other patient was not seen by us again but

we were told that he had a recurrence. It is just possible that the fault lies with us in our dosage and technique, but in another series of cases treated by pre-operative radiation of the primary lesion and the lymphatics draining the lip, followed up by surgical removal of lesion and palpable glands and post-operative radiation, we have had much happier results.

In cases where we have palpable nodes we make a combined application over the primary lesion and the lymph glands affected, using buried needles and surface applicators, of about three thousand milligram hours. This is done as a pre-operative measure. After five to eight days we think we have allowed sufficient time to inhibit cell proliferation in the disease area, and we remove first the affected glands under local anesthesia, usually one half per cent novocain with adrenalin. In removing the glands the mouth is well covered to prevent any contamination of the submaxillary incision from the dirty lip area. An incision is made from a point about one-half inch below the angle of the jaw to a similar point on the opposite side. The platysma is divided and laid upward over the chin. Next all gland tissue in the triangles and all the lymphatics that can be secured are removed. The usual care is taken in regard to hemostasis and avoidance of any injury to nerves. The wound is closed without drainage by interrupted sutures of either silk or linen.

If the patient is not too much disturbed by this procedure we go ahead with the removal of the primary lesion. This is done under the same kind of anesthesia. A vertical incision is made on either side of the ulcer allowing at least a half inch of apparently healthy tissue between the ulcer and the line of incision. These are carried down well below the growth and connected by two slanting incisions at or near the point of the chin. This whole mass is now peeled out down to the bone. To reconstruct the lip we mobilize what is left on either side by carrying incisions outward from the angles of the mouth. Next the mucous membrane at the lower borders of

the gums are cut and the whole flaps are pulled around to meet in the midline. In practically all cases these flaps can be so mobilized that the lip surfaces can be sutured with very little tension. The mucous surfaces are sutured with absorbable gut and the skin surfaces are made fast with through and through sutures of silkworm gut. The raw surfaces of the lip brought around from the side are sutured and soon heal over. The lip, while not as good as new, is often surprisingly free from tension. At the conclusion of the operation we usually place a gauze bandage over the lower part of the face for the first twelve hours, this for the double purpose of pressure on the face and neck wounds and to catch dribbling saliva. On the second day all bandages are removed and only a dusting powder is used for dressing over the wounds. We find that the wounds heal better and the patient is more comfortable. Sutures are removed in eight days and the patient told to report in a month for a second application of radium over the operative fields. After this he comes in more or less at his own convenience unless there is some special reason for seeing him.

As stated a while ago, we are not yet convinced that radium alone is the safest way of handling these cases. Certainly it is the greatest single agent we have in combatting this dread disease, but we are still in our swaddling clothes with radium. Let us hope that a little more time and experience will warrant our laying aside the knife in all cancers in favor of the less drastic rays.

CANCER OF STOMACH.*

Report of a Case.

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The management of cancer, in whatever tissue of the body located, has long been recognized as an undisputed field for the surgeon. In more recent years the development of x-ray and radium treatment, with a better understanding of its action,

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has entitled it to a place, second to surgery in the physician's armamentarium. Indeed, in the treatment of certain superficial cancerous lesions and in those so placed as to permit accurate and direct application of x-ray and radium energy, such as cancer of the skin, tongue, mouth, cervix uteri, etc., the surgeon has come to choose this method in preference to operative interference, in an increasing number of cases, particularly when seen late. It seems fair to predict that the future management of malignant conditions, in general, will best be met by the close association and co-operation of workers in the domain of radiation therapy in collaboration with the surgeon.

As concerns the question of deep-seated cancer, such as carcinoma of the stomach, our present knowledge places the whole burden of treatment upon the surgeon, whose responsibility calls him to serious consideration of the apparent growing menace in an unquestioned field of his endeavor.

Concerning Cancer in General.

The enunciation of the word cancer, after consultation in a doubtful case, strikes terror to the heart of the sufferer and at once casts gloom over the whole future prospect. This mortal dread of malignant disease has come about as a result of past failures in the management of cancer and must be charged directly to dereliction on the part of our profession. It is not enough to pronounce a case cancer and refer it to a fellow colleague for operation. Frank cancer has baffled the efforts of the surgeon in the past and will continue to furnish a high mortality and morbidity rate in the future. The clear duty of the physician in whatever field he may be laboring, is to strive to recognize the pre-cancerous lesion. Only in this way will a more hopeful attitude be created in both the mind of the laity and physician.

Let us briefly review the outstanding facts presented concerning the question of cancer in general. Are we keenly alert to the ravages of this disease which attacks by preference the white race, and, in strik-

ing frequency, the intellectual peoples of the world? Only two groups of diseases stand ahead of cancer in the International List of Causes of Death. The degenerative diseases, namely: heart and kidney affections come first, furnishing the cause of death in one out of every five throughout the registration area. Tuberculosis, in its various forms, and pneumonia with its complications, take equal rank, occupying second place as the most common cause of death, destroying one out of every ten dying throughout the registration area—comprising some eighty million of our population. Cancer takes third place and during 1920 caused the death of one out of sixteen who died throughout the country, reaching the appalling total of 72,989. This fact is made even more striking when we recall that during our two years of active participation in the World War there were twice as many deaths in this country from cancer alone as occurred in the armies of the United States from all causes combined.

For Georgia the statistics are no less striking when inaccuracies in diagnosis are considered. During 1919 there occurred 1,280 deaths from cancer, more than three lives lost every day of the year, there being reported to the Board of Vital Statistics a cancer death in every 33 reports. In 1920 the increase of cancer reports was 25 per cent over the preceding year, and for 1921 an increase over 1920 of 33 per cent.

Actual report of deaths from cancer:

Year	Deaths
1919	640
1920	824
1921	1,212

The officer in charge of this department in the Vital Statistics Bureau feels that it is justifiable to double these numbers to account for inaccuracies in diagnosis and failure to return death reports.

While the analysis of statistics for Georgia seems to show an incidence of one cancer death to about thirty, which is apparently one-half that reported for the whole country, the striking facts are that cancer in Georgia is either on the increase from

year to year, or, that better diagnoses are being made to account for the increase.

Cancer of the Stomach.

The most common cancer is located in the stomach, men suffering in greater numbers than women, as revealed by numerous reports. More than one-third of cancerous conditions affecting men involve the stomach; while more than one-fifth of cancer seen in women involves the stomach. Throughout the registration area, some 38 people out of each one hundred dying from cancer, have stomach cancer. Next in frequency is cancer of the uterus; and taking third rank, cancer of the breast.

With stomach cancer occupying first place in incidence tables, is it not quite probable that we, as physicians, are permitting ourselves to overlook deep-seated cancer in this most common region while attention is focused upon the purely obvious types, i. e., cancer of the breast, uterus, etc.? As a matter of fact, public education on this subject must be stressed since the physician cannot lasso an unwilling subject and insist upon a thorough investigation for suspected malignancy. Application must be made to the physician for advice. Public education only will awake the people. Lest we stand as stumbling blocks in the path of progress and out of plain man to man fairness, it is incumbent upon the physician to study patients seeking advice—to study each patient presenting dyspeptic symptoms of chronic form—with a thoroughness that does not admit of frequently recurring error.

This disease is common. It is the terminal stage of many dyspeptic complainers. Doctors have not considered the subject with that seriousness which recent statistics and clinical observation demands. Cancer will continue to becloud the usefulness, to cast despair upon our people, to meet a fatalistic attitude on the part of the sufferer, just so long as terminal cancer alone is considered. Would we offer hope, lessen operative mortality, save mutilating operations, we must anticipate the tragedy. Before inoperable cancer of the stomach

comes operable lesions of the biliary tract and curable ulceration or chronic irritation amenable to conservative surgery.

The cause of cancer is in doubt. That it is a morbid state of the body, depending to some extent upon heredity, rendering the susceptible individual subject to the outbreak of cancer at the seat of chronic irritative foci, seems certain. This definition seems to tally with clinical observation.

The most frequent pre-cancerous lesion of the stomach is gastric ulcer. The occurrence of ulceration prior to cancer, based upon careful history taking, seems present in the majority of cases. Osler found history of ulcer present in 22 per cent of cases; McCarty found a positive history in 70 per cent of cases studied, while C. H. Mayo, in a reported series, says that ulcer preceded cancer in 40 per cent of the cases.

While a great majority of potential cancers of the stomach express themselves for months or years as elusive and what is often considered by both patient and physician as trivial indigestion, or by marked symptoms characterizing the familiar clinical picture of stomach ulcer, before the appearance of tumor formation, hemorrhage, cachexia, etc., it cannot be denied that many cases come on rapidly, with a previous history so negligible as to fail to arouse the suspicion of the most scrutinizing diagnostician. "The enemy is in the camp!" must be our watchword. Eternal vigilance is the physician's most potent weapon.

Of convincing frequency as concerns the question of ulcer as an etiological factor, is the appearance of cancer in those regions of the stomach most commonly the seat of ulceration, namely, the pyloric antrum and lesser curvature. This fact alone seems to me sufficient to convince the most skeptical among us of the direct relation which ulcer bears to cancer.

Symptoms of Gastric Cancer.

The symptomatology of this affection, in its incipency, is not clean cut, as may be surmised from the foregoing consideration of pre-cancerous lesions of the stomach. Symptoms characterizing the pre-

cancerous lesion change but little if at all, when malignancy supervenes. So gradual is the process that no pathognomonic signs appear indicative of a change to the malignant state.

Our attention must be directed to the interpretation of a group of symptoms associated with several upper abdominal conditions, symptoms which suggest the familiar picture observed in connection with chronic dyspepsia.

If reliance is to be placed in the older text-book symptoms, such symptoms as are associated with the terminal lesion, cancer will continue to destroy its victims in spite of surgery, however spectacular may be its action or far-reaching its thoroughness.

Our attitude toward the stomach sufferer, toward the chronic dyspeptic, must be one of suspicion. Real danger lurks where gas constantly annoys, where pain, pyrosis, fullness, hunger pain, etc., speak in no uncertain terms of resident chronic irritation. Let us forget palpable tumor, lost weight, hemorrhage. These bespeak only our lack of thoroughness at previous consultations.

Diagnosis.

An unqualified diagnosis of cancer of the stomach can be made when the lesion is advanced. Here the x-ray shows a filling defect and the physical examination an epigastric mass. Elimination of syphilitic induration and the occasional extra-gastric tumor in this vicinity, leaves a case characterized by the above symptoms open to little doubt. But what of the value of diagnosis in such cases? Very little of real worth can be claimed for the sufferer and surely the exercise of only meager skill upon the part of the physician is all that such a diagnosis requires. To the larger group, however, characterized by more or less mild symptoms commonly attributed to faulty digestion, real hope may be offered. By a painstaking analysis of the symptoms presented the examiner will be able to eliminate medical cases, frequently presenting a similar chain of symptoms and that usually without the necessity of exploratory laparotomy. For

this group surgery offers much in the way of early palliation and cure. Frequently, in routine examination, when upper abdominal conditions are being operated for, a surgeon is rewarded by the discovery of an early cancer. Daily pre-cancerous lesions of the stomach are being handled and it is indeed comforting to know that in the successful management of these, the chance of full-fledged malignant growth is happily dissipated. Occasionally an unnecessary laparotomy is done, except as it substitutes fact for fancy, direct information gained by sight and touch, as opposed to that obtained by surmise and changing clinical data.

Suffice it to say as concerns the diagnosis of cancer that while expert x-ray and clinical opinion, with a small degree of error, may venture a positive diagnosis in the curative stage, for the average practitioner this refinement would best be supplanted by a willingness to be charged with error in urging early exploration on the ground of cancer suspicion when no cancer was found, rather than permit the patient to go into the terminal stage of his disease waiting for positive evidences on which to hazard a certain diagnosis. Of the two evils, the patient suffers less from negative exploration than from neglected cancer. The ideal position would be that which permits the occasional physician, possessing a rare degree of acumen, to sense a malignant stomach before the development of metastasis and in time for complete eradication by resection. Unfortunately, this gift is vouchsafed to but few.

Treatment.

The management of cancer of the stomach is surgical. Unanimity of opinion, while not accorded the surgeon as concerns the question of ulcer, is freely given when cancer is suspected. Internists, gastroenterologists and surgeons here agree. Such harmony of opinion would avail much could it only be applied in the form of exploratory laparotomy, in all doubtful cases.

Unfortunately, cancer develops metastases to the liver and other adjacent viscera

so rapidly when finally the protective threshold has been lost, that only some 25 per cent of the cases seen offer any hope of complete eradication. In this group wide resection by any recognized method gives relief from symptoms and extension of life for varying periods of time—for three years 37 per cent, for five years 25 per cent, and for ten years in a few cases, all depending, as one might surmise, on the case with its many attending factors.

For the group showing diffuse metastases, with massive tumor formation, only palliative gastro-enterostomy is done, and this only when needed to allow stomach emptying. In some 50 per cent of the cases now referred for operation the surgeon is confronted with the necessity of opening the abdomen, only to find hopeless involvement of all upper abdominal viscera. At this hopeless stage no voice is raised in criticism of this exploration. How much better would be the procedure if recommended for accurate diagnosis early in the cancer suspect!

The method of resection followed by many clinics seeks to combine the good qualities of the older operations of Billroth, Hartman and Mikulicz, with certain obvious advantages in the plan of Polya, the original Kronenlin technique. This operation differs from the older types in that, establishment of the continuity of the intestinal tract, is brought about by the attachment of the jejunum to the cut end of the stomach by either what is known as the posterior or anterior method. The anterior Polya possesses certain advantages over the posterior attachment and is the method of choice by many operators. This is a satisfactory plan and easy of execution by anyone who has mastered the principles of abdominal surgery. The mortality from all the operations devised runs about the same—14 per cent. The tendency now is to extend the field of radical resection to include a group of cases formerly considered inoperable.

The development of the anterior Polya technique, which obviates constriction about the anastomotic area so often seen

in the posterior Polya, resulting from drag of the transverse meso-colon or from induration of this stricture with cancer metastasis, has enabled the surgeon to offer considerable extension of life to that group presenting metastasis into the gastro-hepatic and gastro-colic mesenteries, and formerly refused operation. Only when the liver is involved or when massive involvement of all surrounding viscera is found, should the operator be content to abandon efforts at palliation through stomach resection, which has recently proved its worth when applied to these otherwise hopeless cases.

Illustrative of the value of this viewpoint in the advanced group referred to, I wish briefly to present a case report.

Report of Case.

Mr. S. G. H., Atlanta, Ga., carpenter, age 38, white. Referred for examination by Dr. Geo. M. Niles, November 25, 1918.

Chief Complaint: Stomach trouble.

Family and Personal History: Negative except that patient had suffered from what he called stomach trouble over a period of some four years. During the early part of this period, covering some three years, the chief annoyance was nausea, which come up at night and resulted frequently in the regurgitation of sour fluid. For the past year patient has suffered an increase in the constancy of nausea and has begun to vomit, particularly at night. He has observed that the vomited matter consists of foods eaten over a period of 24 hours preceding its ejection from the stomach. There has been a loss of 45 pounds in weight during the past 18 months. The appetite has not been affected. There has been very little pain and the symptoms characterizing a stomach ulcer are conspicuous by their absence.

It will be observed that the symptoms in this case indicate a slow shutting off of the pylorus, with starvation ensuing.

Examination: The examination revealed the following findings: The patient's skin was dry and scaly, presenting the appearance seen in pellagra cases, except that it was of a general nature. There was con-

siderable emaciation. The red cell count was 3,000,000, the hemoglobin estimated 70 per cent. The general physical examination was negative except for the abdomen. On palpation a tumor mass, slightly fixed and lying in the epigastric region transversely, was easily felt. This mass appeared to be about 3 inches in its transverse and some 1 1-2 inches in its vertical diameter. The mass moved up and down with the excursions of the diaphragm. There was some tenderness on palpation.

On x-ray examination in the laboratory of Dr. Niles, the stomach showed a filling defect involving the pyloric antrum and almost completely blocking the stomach outlet. The Wassermann reaction was negative.

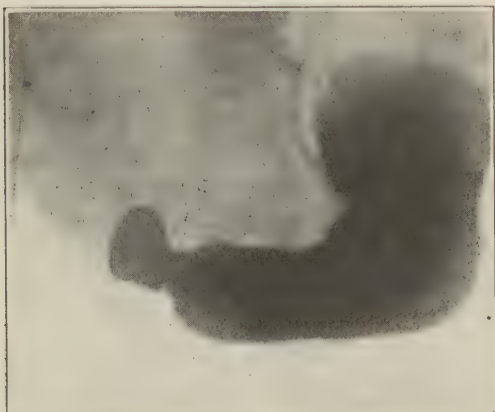


Fig. I. Deformed duodenal cap. Pylorus blocked. Lumen encroached upon by growth.

(From the physical examination of this case and the x-ray findings, one would be led to venture a diagnosis of malignancy of the stomach. Syphilis would have to be considered, although the Wassermann test was negative.)

This patient was admitted to the Georgia Baptist Hospital, where an upper exploration was made. A tumor mass, involving the pylorus and stomach antrum, with dimensions as indicated above, was found. The mass was freely movable, there being no enlarged glands palpated in the gastro-hepatic or gastro-colic omenta. The tumor mass was very hard, with a slightly movable peritoneum covering it. The liver was not involved.

(At this operation I was led to choose

gastro-enterostomy in an effort to nourish this patient instead of resorting to immediate resection of the stomach. This temporary expedient was followed. Considering the later history of the case, if the operation was again being performed, I would do the resection primarily.)

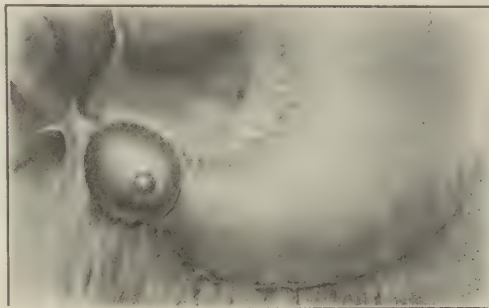


Fig. II. Appearance of tumor at first operation. Stomach outlet completely blocked.

Following the posterior gastro-enterostomy, after the recognized technique, this patient made a very rapid and uneventful recovery from operation and left the hospital at the end of 18 days.

Weight at the time of operation was 118 pounds. Within 3 months following operation patient had gained 34 pounds. Five months following operation the weight was 157 pounds, which brought the patient to within 8 pounds of his normal weight.

Although it had been my intention to readmit this patient for a resection of the mass, there had been such a gratifying response to the first operation and the patient appeared so well, being without

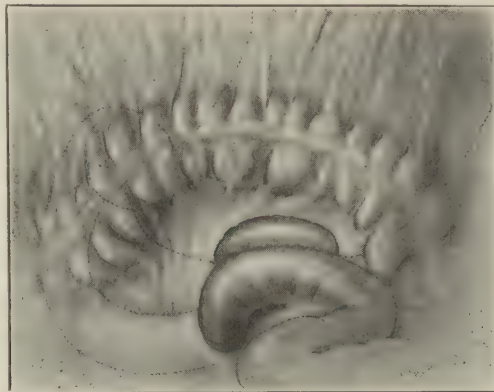


Fig. III. Posterior "no loop" gastro-enterostomy.

symptoms entirely, that I was unable to get his consent to re-enter the hospital.

The tumor mass was still palpable in the epigastric region. A re-examination with the x-ray showed the filling defect still present to the same degree. Although repeated Wassermann blood tests were negative, and due to our inability to get the patient to re-enter the hospital for further operative measures, a most thorough and intensive course of anti-syphilitic treatment was administered. This consisted of intravenous salvarsan - potassium - iodide and mercury, extending over many weeks. There was absolutely no response to this treatment so far as the size of the tumor mass was concerned.

The latter part of 1919, some 9 months following the first operation, patient reported a slight loss in weight. From this time on until re-admittance to the hospital in February, 1921, there was steady loss of weight and evidences of a low grade toxemia, with a persistence of the stomach mass, and with a gradual increase in the systemic manifestations of failing vitality.

The patient was re-admitted to the Georgia Baptist Hospital on February 18, 1921, more than two years after the first operation, for resection of the stomach.

(It is interesting to note that at this time the blood examination showed more than 4,000,000 red blood cells, with the hemoglobin estimate 85 per cent, the white cells 6,200.)

Under local infiltration of the abdominal wall and gas-oxygen, the abdomen was again opened, when it was found that the tumor mass above noted had increased considerably in size, so that now the entire antrum of the stomach was involved, the induration stopping just short of the anastomotic opening between the stomach and jejunum. While there were several enlarged lymph nodes in the mesentery adjacent to the tumor, the whole mass was still freely movable. Unfortunately, there were adhesions between the tumor and the over-lying abdominal wall, so that an invasion of the abdominal wall with the growth was suspected. A portion of ab-

dominal wall was excised, being that part attached to the tumor mass. The gastro-enterostomy anastomosis was cut loose and the stomach antrum containing the tumor was resected. Since the original opening in the jejunum resulting from the prior gastro-enterostomy was present, the posterior Polya technique was decided upon in order to utilize this opening for attachment to the cut end of the stomach.

The operation was well borne and although quite lengthy, the patient left the table with a pulse of 90.

The weight at the time of the second operation was 132 pounds. There was rapid and uneventful recovery from this operation, the patient leaving the hospital at the end of three weeks with primary union. A very gratifying gain in weight

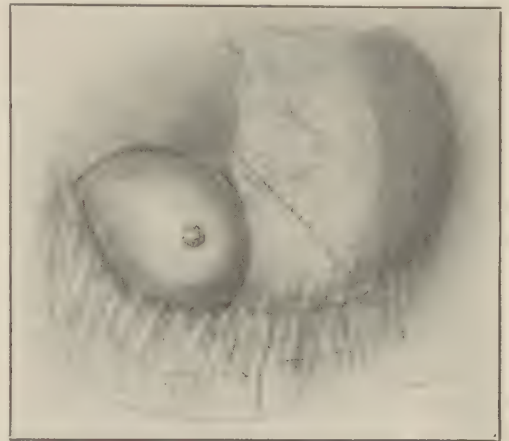


Fig. IV. Appearance of tumor at second operation. Old gastro-enterostomy opening encroached upon.

followed, so that in May, 1921, patient weighed 143 pounds. This gain in weight, with the ability to eat and digest with comfort, has been maintained. At this time, more than a year since the resection, patient weighs 150 pounds and has returned to his work as a carpenter, being in charge of a building crew. He presents no symptoms whatever, his appearance is good, and the physical examination shows no abnormality in the epigastric area.

It is of interest to further record that in July, 1921, five months after the stomach resection, this patient was seized with acute abdominal pain, typical of obstruction of the bowels. He was admitted for

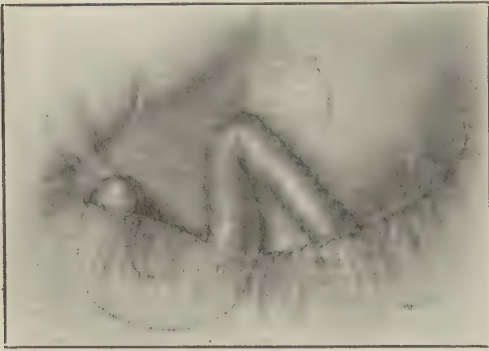


Fig. V. Stomach antrum resected and continuity of bowel re-established by drawing loop of jejunum through opening in gastro-colic mesentery.

the third time to the hospital, where a third laparotomy revealed an obstruction of the ileum some 18 inches from the ileocecal valve, due to adhesions. There was an uneventful recovery from this operation, the patient leaving hospital in two weeks. There has been no further difficulty in this particular.

The results obtained in this case, from the standpoint of surgical technique, I think you will agree, have been spectacular. Due to an error in judgment, at the time of first operation, it is to be feared, however, that the final outcome will be cancer death. The radical operation, although done at a late period, has already given an extension of life for 23 months, during which time patient has lived in

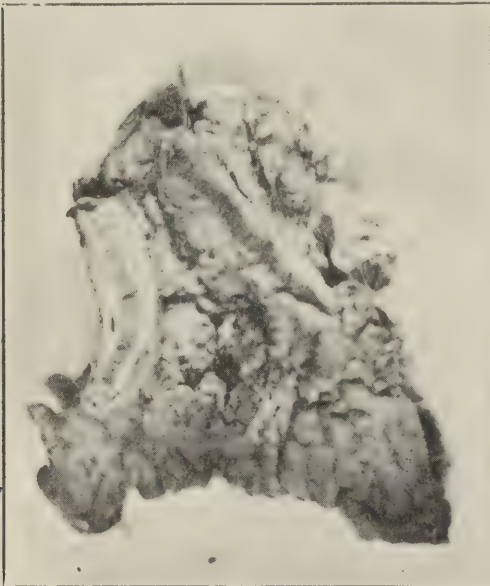


Fig. VI. Gross appearance of tumor mass.

comfort and has been able to resume his regular occupation.

In order to verify this record up to date, January, 1923, patient has been re-examined and found in excellent physical condition and free from symptoms.

20 E. Linden Avenue.



Fig. VII. X-ray of stomach after gastro-enterostomy showing stomach emptying through newly established opening. Note again complete blocking of pyloric outlet.

DISCUSSION OF DR. ROBERTS' PAPER, "CANCER OF THE STOMACH."

Dr. L. C. Allen, Hoschton:

The greatest problem connected with cancer of the stomach is making an early diagnosis, but that, in our present state of knowledge, is often impossible to do. If some genius will come forward and give the profession some plan or some method by which cancer of the stomach, in its early stages, can be discovered, he will make himself famous.

It is true that one swallow does not make a summer, but we often learn our most important lessons from one individual case. We had a case of cancer about a year ago that taught a very important lesson. This man was treated by my son and myself. He was a very extraordinarily healthy, strong, large, vigorous farmer, and he owned considerable property. He came to us not because he was sick, and not complaining of any particular symptoms, but because he felt badly. Upon examination he was found to have one and a half to two degrees of fever. Outside of that, nothing could be discovered. We examined him from day to day and from week to week, went over his lungs carefully, because we suspected tuberculosis, examined every organ in his body, went over everything we could think of that could be causing that general weakness and fever, and yet could find nothing. We took particular pains in examining him to find out what was the matter, because he had no symptoms, just the fever and weakness. After keeping him for three or four months, examining everything, teeth, lungs, everything, we sent him to Atlanta and put him under the care of Dr., and he examined him in every conceivable way. At first he was inclined to suspect the lungs, as we had, but abandoned that, and then had no idea what was the matter with him. He did not have a symptom to call attention to the stomach, and after he had been there for a month or six weeks they had been absolutely unable to make a diagnosis. Then one day very suddenly he had a hemorrhage from the

stomach. This was investigated, and it was found that he had an advanced cancer of the stomach. He came home, and we looked after him until he died. We did a post-mortem, and found an enormous cancerous mass in the stomach. This demonstrates clearly that you can

Dr. N. Alpert, Atlanta:

Dr. Roberts' paper is of great scientific value. I would like to ask Dr. Roberts, or any of the other doctors, the following question:

I lived in China for a time, and I have heard from the missionary workers in the hospitals, that they have very few cases of cancer of the stomach among the Mongols. In the deeper parts of Siberia, where there are a great many different tribes, Kirgis and Kalmuyks, they do not have a single case of cancer of the stomach. Japan reports a very small amount of cancer. Among the Eskimos, Dr. J. Bilkoff reports that he has not seen one case of it. Don't you think that food has a great deal to do with it? Where people live on a vegetable diet and oil, fish, etc., they are found to have a very small mortality from cancer of the stomach.

Another important fact about cancer is that many times, in examining the stomach contents, you have a different finding every day. One day you will find a large amount of hydrochloric acid, and a few days later you will find a diminished amount of it; one day a decrease in pepsin, and another day an increase in pepsin.

Dr. Allen H. Bunce, Atlanta:

I rise to call attention to a few concrete facts. I believe that one case carefully studied and investigated is of more value than generalizing about a great many.

The first and most important thing in the diagnosis of cancer, especially of deep-seated cancer, is to use all of the facilities at our command to make a diagnosis. The habit into which we have fallen at the present time, that of sending a patient to a man doing one certain line of work and expecting him to make a diagnosis for us, is a very serious fault. In other words, you have a patient with stomach symptoms, and you examine the stomach contents and expect to make a diagnosis in that way. The only way in which any advance will be made in the early diagnosis of cancer, as well as in other things difficult to diagnose, is a careful study of the history and clinical symptoms, a thorough physical examination, and then putting all the findings together with the laboratory findings, and trying to reconcile them. Do not depend upon any one thing to make a diagnosis. To the surgeon I would say, make a more careful study of the patients upon whom you operate. In doing work for one of the large hospitals in Atlanta, I have been struck by the frequency with which surgeons will take out a tumor and never look inside of it. They are neglecting their best opportunity to learn something about surgery and medicine.

In the diagnosis of a tumor, your senses are of the most value. What does it look like? What does it feel like? Yesterday Dr. White made a remark about the discrepancies reported by Dr. Bloodgood in tumors of the breast. In 77 per cent of the cases you can make a diagnosis by looking at the tumor, feeling it, studying it grossly. You do not need a microscopical examination. The discrepancies were probably in the other 23 per cent, which are in the doubtful class.

The case reported by Dr. Allen is very instructive. We have a few patients who are going around now, able to be up and out, who had cancer of the stomach, because the diagnosis was made largely by accident.

This tumor removed by Dr. Roberts is of the pylorus. It is a scirrhus carcinoma, which is a slow growth. It is absolutely characteristic. If you examine one, you will know it the next time you see it. You do not need a microscope. You need a microscope only in the doubtful cases.

Dr. J. M. Poer, West Point:

I thoroughly agree with Dr. Bunce that a thorough investigation is necessary in these cases. The difficulty that confronts the physician in making an early diagnosis is that he is handicapped in two ways. The first is that his patients are poor and are unable to pay for the examinations; and the next is that he himself is poor and has not the apparatus to make the investigation. So we have to send our patients to these experts, and our experience as country physicians has been that the expert keeps them and we never get them back, and often never know what the diagnosis is. What the country physician needs is an X-ray laboratory in his town, and then he can make the diagnosis as well as any one else.

I had a case that vomited blood at intervals of three or four months for several years. He was a very poor man, living on a farm, and was unable to go to an expert for examination. On account of the pain and vomiting, I diagnosed it as ulcer of the stomach, with probably beginning cancer. I finally got the community interested enough to have him examined, and upon examination, made recently, it was found that he was not suffering from cancer of the stomach, but from with splenic infection and pernicious anemia—not a stomach condition at all. Had we had a laboratory, we would not have had to let this man go on so long before having his operation.

Dr. Roberts closes the discussion:

I appreciate the free discussion which this subject has received. The spectacular end of this paper is the appended

case report which I was sorely tempted to first offer. I appreciate, however, what Dr. White has said. The thing we want to do as physicians is to place emphasis, not on spectacular operations, but to realize that surgery is hampered, is well-nigh useless unless we get hold of these cases in their incipency.

SECONDARY EFFECT OF SCOLIOSIS ON THE INTERNAL ORGANS.*

Theodore Toepel, M. D.,
Atlanta, Ga.

Considering myself in a measure a pioneer in this section in the study of scoliosis and noting a growing interest on the part of some of my colleagues in the phase of afflictions of children, I feel justified in bringing this subject to your attention at this time.

Conclusions drawn from my observations in the study of this condition, dating back to the year 1898, have been substantiated again and again and examinations of children in the public school and the more thorough examination of children in private practice show an increase of about 5 per cent in the number of cases afflicted with scoliosis from the 7th to the 10th year.

These are the first three years of the child's school life when it is robbed of the freedom of play and of spontaneous exercise in the open. It is now compelled to sit still for a long period of time in an uncomfortable piece of furniture called a school desk and woe to the poor body that is not fortified with strong muscles, tendons, ligaments and a good, strong framework. It will surely succumb to this unnatural restriction where the physical body must play a subservient part to mental development. However, with the continued interest which the medical profession manifests in educational institutions of the state, the child which has not been endowed with a strong physical body, will fare better in the future than it has in the past. When doctors discover the underfed body with its corresponding weak muscles, tendons and ligaments and at the first signs of a slight deviation from the normal medial line to either side of the spinal column, immediately suggest remedial measures to be instituted, such as special

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

desks and chairs, more play, specific exercises, better food, or, if the case warrants, taking the child out of school entirely, to begin corrective measures, as mentioned above. When this is done, then every case can be improved from 75 to 100 per cent.

On the other hand, if co-operation of the physician and educator does not exist and for some unaccountable neglect the poor innocent child is allowed to pass through the years of greatest growth and development, its body will then assume a distorted appearance of which the afflicted is conscious and usually makes him shun society; and worse than this, the inevitable secondary effect which the distorted spinal column and ribs have on the internal organs is a fact to which physicians have given little attention, but which is of such vital importance to the afflicted that I shall speak briefly on the pathology of the internal organs caused by scoliosis.

In the intermediary and advanced scoliosis a shortening of the trunk takes place, on account of which the internal organs are relatively damaged and their normal development and physiological functioning undergo changes.

In the mild form of scoliosis we do not observe any changes in the internal organs, but in the intermediary stage functional disturbances appear. The patients are usually anemic, suffer from breathlessness at the least physical exertion, and pathological findings prove a tendency to tuberculosis of the lungs. Bachmann, in observing 197 cases of scoliosis of the intermediary and advanced stages, found 28.3 per cent afflicted with tuberculosis of the lung. A similar proportion has been found by Dr. Landham of Atlanta.

In advanced cases the above-mentioned conditions appear in various degrees of severity. Subsequent ailments of the internal organs are caused by decreased space. In an advanced right convex dorsal scoliosis the right plural cavity is changed to a long, narrow space and the ribs of such cases are practically twisted around

the spinal column. The boundary of the mediastinum is now formed by a line which runs from the right side to the dislocated rotated spinal column forward to the middle of the sternum. For this reason the right side of the mediastinum is turned to the front, and vice versa.

The same cramping of space which affects the lungs also involves the heart. It is most frequently crowded upward and forward, resting against the wall of the chest. In a case of right convex scoliosis the heart is in most instances pushed to the left but its relative position to scoliosis varies. In reference to the condition of the different parts of the heart it is well known that hypertrophy and dilatation of the right heart is a specific condition of advanced scoliosis. The position of the aorta is influenced in scoliotic conditions which Bouvier describes in detail. In the right convex scoliosis the aorta follows the curve of the spinal column to such an extent that it lies in front of the spinal column at the acute curve and the opposite relative condition occurs in the lumbar vertebrae of the spinal column.

One of the principal reasons which cause the dilatation and hypertrophy of the right heart in these cases is the diminished respiratory function. On this account the function of the heart is increased to an abnormal degree in order to pump the necessary amount of blood through the lungs. The right heart is especially involved and becomes hypertrophic.

When the deformity increases and with the deficient space for the lungs which are prevented to expand normally, due to adhesions and crowding of their cells, is added the unfavorable position of the heart through pressure against the wall of the chest and the changed arterial and venous pressure through the checking of blood vessels, the work of the heart is overtaxed to the utmost degree.

The lungs through which blood does not pass freely, due to this crowding and adhesions, increase the venous stasis and produces abnormal dilatation of the heart.

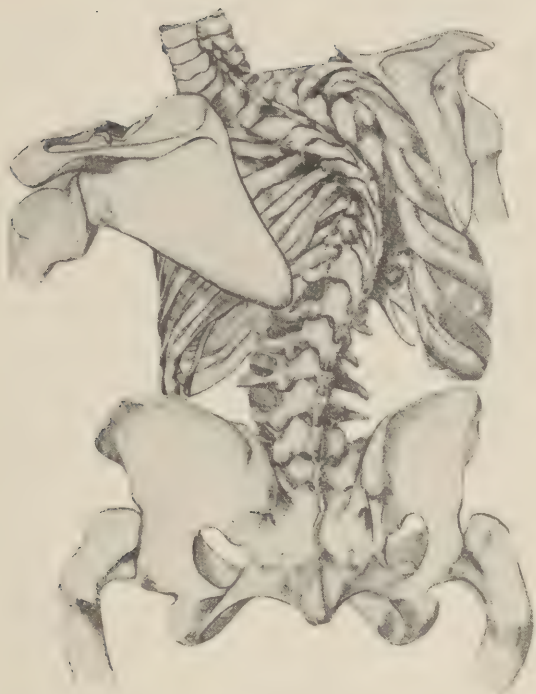


Fig. I.
Rear view of skeleton of a rachitic right dorsal scoliosis.
After Bouvier.

As clinical evidence shows, this, however, is preceded by enlarged veins of the neck, head and arms, a special characteristic condition of the pathologic heart in scoliosis.

A decided shifting of the diaphragm is to be expected on account of the marked displacement of the points of insertion on the lower border of the thorax and the spinal column.

This shifting, however, is marked only in relation to the pelvis. When the spinal column deviates far to the right in advanced scoliosis and thereby the abdominal vertical line is shortened, the diaphragm descends with the thorax. Otherwise the changes in the position of the diaphragm are not particularly noticeable because the lateral deviation of the spinal column in advanced cases displaces the lower border of the thorax to which the diaphragm is attached in the same manner as it does the entire thorax. The diaphragm in the oblique position tilts in relation to the vertical sagittal plane of the



Fig. II.
Position and shape of organs in thoracic and abdominal cavities of a right dorsal scoliosis.

body obliquely towards the side of the most pronounced deviation of the spinal column.

The intestines are forced downward and forward. Displacements develop which are caused by the shifting of the thorax against the pelvis, and a displacement may occur due to a lateral deviation of the spinal column.

The crowding down of the abdominal contents is frequently manifested by the crowding of the intestines into the lower pelvis.

The shifting of the thorax towards one side affects particularly the transverse colon which frequently assumes the oblique position and at times even a vertical position.

The lateral tilting of the spinal column which influences the position of the diaphragm and the consequent crowding of space on the convex side impair the liver to such an extent that the right half of the liver has not enough space and is, therefore, crowded to the left. Therefore, the

left half of the liver is better developed than the right and the pressure of the ribs produces deep indentations in the organ.

The lateral deviation of the spinal column has a special influence upon the kidneys. The right kidney is often displaced upward along the spinal column, while the left kidney is displaced downward.

Another organ which undergoes a marked change from the lateral deviation of the spinal column is the stomach, corresponding to the changes in the liver and the duodenum. The pylorus descends considerably while the cardiac end, correspond-

ing with the deviation of the left half of the diaphragm, is raised.

The foregoing discloses that the internal organs undergo numerous changes due to scoliosis which could be prevented if necessary importance were attached to the early, mild changes of the spinal column, before the structural changes have taken place, by proper correction of the sitting position at home and at school, the lying position in bed during sleep, the standing position and by special exercises, affecting the weakened muscles and ligaments at the early stage.

78 Forrest Ave.

THE JOURNALOF THE
MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

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FEBRUARY, 1923

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 Publication Committee
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 W. A. MULHERIN, M. D.
 T. C. THOMPSON, M. D.

Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

EDITORIAL DEPARTMENT**AN ANNUAL PROGRAM FOR COUNTY SOCIETIES.**

Some time ago we received a copy of the Annual Program of the Washington County Medical Society of Oklahoma, which furnishes real food for thought in reference to our own county societies. This society makes out its program for the entire year, so that all members may know in advance what subjects are to be discussed at each meeting. This is a distinct advantage since it gives each essayist ample opportunity to prepare his paper in advance and also enables each member to pay special attention to the subjects to be discussed during the year in this society.

January—Trachoma: Diagnosis and Treatment. Clinics.

February—1. Abortion: When Justifiable, and Treatment of Inevitable Abortion. Clinics. 2. Gonorrhea: Male and Female, and Its Treatment. Clinics.

March—1. Rheumatism: Cause and Treatment. Clinics. 2. Ectopic Pregnancy: Its Diagnosis and Treatment. Clinics.

April—1. Impetigo: Its Diagnosis and Treatment. Clinics. 2. Gastritis: Acute and Chronic, Its Diagnosis and Treatment. Clinics.

May—1. Tonsils: Diseased; and Are Good Tonsils Being Removed Unnecessarily? Clinics. 2. General Resume: Medical and Surgical.

September—1. Reports of Vacations and General Business. 2. Paper on Diabetes Mellitus: Its Diagnosis, Diet and Complications. Clinics.

October—1. Appendicitis: Its Diagnosis, Differential Diagnosis and Treatment. Clinics. 2. Spasmodic Croup: Differential Diagnosis and Treatment. Clinics.

November—1. Mastoiditis: Diagnosis, Differential Diagnosis and Treatment. Clinics. 2. Pneumonia: Diagnosis and Treatment. Clinics.

December—1. Election of Officers. Clinics. 2. Fractures of Humerus, Upper Middle and Lower Third. Clinics.

Since receiving the above from Oklahoma, we have received the program of our own Tri County Medical Society, which is made up from the counties of Calhoun, Early and Miller. Their committee on Program and Scientific Work, composed of the President, Dr. J. L. Cheshire and Secretary-Treasurer, Dr. C. K. Sharp, has prepared a most excellent program to be carried out during the year. All of their meetings will be held at Blakely, unless notified otherwise. Meetings will be held at 2:00 p. m. Amongst the subjects to be discussed are the following:

February 14th.—1. Pulmonary Tuberculosis. 2. Pneumonia.

April 11th.—1. Chronic Nephritis. 2. Acute Nephritis.

June 13th.—1. Infantile Diarrhoea. 2. Rural Surgery.

August 8th.—1. Obstetrical Technique. 2. Puerperal Septicaemia.

October 10th.—1. Menstrual Disorders. 2. Gonorrhoea.

December 14th.—1. Syphilis. 2. Resume of the year's work, with suggestions

for the betterment of conditions for the new year.

The question of keeping alive the interest in a county society is one of the most difficult to be faced by both the officers and members. Of all the things that have been proposed to keep alive this interest, we believe that the planning and publication of a complete, annual program, together with definite meeting dates, will do more than any other one thing.

THE CRAWFORD W. LONG STATUE.

The campaign for raising \$10,000 to place a statue of Dr. Crawford W. Long in the Hall of Fame in Washington has been on for two months, and we are advised that less than half the necessary amount has been raised, and that the doctors of Georgia have given less than \$1,000.

Dr. Long was a charter member of the Medical Association of Georgia, and fairly can be called its most distinguished member. After our state has voted a fellow member of this organization one of the two niches in Statuary Hall to which Georgia is entitled, can't every one of us make a small contribution toward carrying out such a project?

The present drive seems to offer the best opportunity we have ever had for discharging this long-neglected duty. If the discoverer of anesthesia is not supported by his brothers in medicine, how can we expect others to help?

Every member of the association has been asked to contribute to this cause. If you have not already done so, mail your check at once to Dr. W. J. Blalock, Treasurer, Fulton National Bank, Atlanta, Ga. Any amount will be welcome.

RANDOLPH COUNTY GETS THE RIBBON.

Dr. G. Y. Moore, the efficient Secretary-Treasurer of the Randolph County Medical Society, heads the list for the year 1923 in being the first to send in his annual report, together with dues of his members.

Randolph County Medical Society held its annual meeting on December 7th and every member of the society, except two, paid their dues promptly. This is a most excellent showing and we hope that other societies will follow the example set by this progressive society.

IMPORTANT NOTICE.

The Committee on Scientific Work is charged with the duty of preparing the program for the Annual Meeting of the Association. According to the Constitution and By-Laws this program must be completed and published at least thirty days before the next meeting, which will be held in Savannah, May 2nd to 4th. In order to carry out this provision of the Constitution and By-Laws, it will be necessary that the title of all papers be received on or before March 15th, since it will require about two weeks for the proper compiling and publishing of the completed program. Therefore, all members who contemplate reading papers before the Association will please send in their titles to the Secretary-Treasurer at the earliest possible time.

In this connection, we wish to call the attention of the members to the following extracts from the Constitution and By-Laws:

Chapter VIII. Section 1. No address or paper before the Association shall occupy more than fifteen minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent.

Section 2. All papers read before the Association, or any of the sections, shall become its property. Each paper shall be deposited with the Secretary when read.

And also to the following resolution which was adopted at the annual session of 1921:

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper shall pay the penalty of not having an opportunity to appear on the program for two years, unless he present an excuse ac-

ceptable to the Committee on Scientific Work.

All manuscripts should be typewritten, double spaced, with wide margins, and on one side of paper only. All papers must be handed to the Secretary immediately after being read.

Your attention is also called to a resolution which was adopted by the House of Delegates at the Columbus meeting of the Association last year, which provides that this Committee must give first consideration to two papers from each Congressional District. While this resolution is not binding upon the Committee, we feel that each section of the State should be represented on the program and, therefore, we will endeavor to carry out the spirit of this resolution.

Respectfully submitted,
A. G. FORT, M. D., Chairman,
Committee on Scientific Work.

IRWIN COUNTY MEDICAL SOCIETY.

Irving County Medical Society announces the following officers for 1923:

President—Dr. H. P. Lyons.
Vice-President—Dr. R. F. McLeod.
Secretary-Treasurer—Dr. L. L. Whiddon.

Delegate—Dr. L. L. Whiddon.

Board of Censors—Drs. G. W. Willis and S. L. McElroy.

CHATTOOGA COUNTY MEDICAL SOCIETY.

Chattooga County Medical Society announces the following officers for 1923:

President—Dr. B. F. Shamblin.
Vice-President—Dr. J. W. Clements.
Secretary-Treasurer—Dr. F. W. Hall.
Delegates—Drs. F. W. Hall and B. F. Shamblin.

Board of Censors—Drs. E. M. Wright, G. E. W. Martin and L. A. Mallicoat.

LOWNDES COUNTY MEDICAL SOCIETY.

Lowndes County Medical Society announces the following officers for 1923:

President—Dr. G. T. Crozier.

Vice-President—Dr. D. W. Freeman.
Secretary-Treasurer—Dr. T. H. Smith.
Delegates—Drs. J. C. Wilson and D. W. Freeman.

Board of Censors—Drs. A. Griffin, Frank Bird and J. F. Mixson.

STEWART-WEBSTER MEDICAL SOCIETY.

Stewart-Webster Medical Society announces the following officers for 1923:

President—Dr. J. M. Kenyon.
Vice-President—Dr. J. H. Foster.
Secretary-Treasurer—Dr. W. F. Walker.
Delegates—Drs. J. M. Kenyon and J. F. Lunsford.

Board of Censors—Drs. R. L. Grier, C. E. Pickett and J. F. Lunsford.

PIKE COUNTY MEDICAL SOCIETY.

Pike County Medical Society announces the following officers for 1923:

President—Dr. J. C. Beauchamp.
Vice-President—Dr. D. L. Head.
Secretary-Treasurer—Dr. M. M. Head.
Delegates—Drs. M. M. Head and J. H. Grubbs.

Board of Censors—Drs. J. R. Graves, I. B. Howard and R. A. Mallory.

TRI COUNTY MEDICAL SOCIETY.

Tri County Medical Society announces the following officers for 1923:

President—Dr. J. L. Cheshire.
Vice-President—Dr. W. C. Hays.
Secretary-Treasurer—Dr. C. K. Sharp.
Delegates—Drs. W. C. Hays and P. H. Fitzgerald.

Board of Censors—Drs. B. K. Simmons, C. W. Twitty and C. R. Barksdale.

HALL COUNTY MEDICAL SOCIETY.

Hall County Medical Society announces the following officers for 1923:

President—Dr. J. L. Meeks.
Vice-President—Dr. R. L. Rogers.
Secretary-Treasurer—Dr. Pratt Cheek.
Delegates—Drs. R. L. Rogers and Pratt Cheek.

Board of Censors—Drs. J. B. Rudolph, J. D. Mauldin and E. T. Gibbs.

BEN HILL COUNTY MEDICAL SOCIETY.

Ben Hill County Medical Society announces the following officers for 1923:

President—Dr. W. D. Dorminy.

Vice-President—Dr. L. E. Thornton.

Secretary-Treasurer—Dr. W. P. Coffee.

Delegates—Drs. E. A. Russell and J. M. J. Luke.

Board of Censors—Drs. Frank Ward and E. J. Dorminy.

CARROLL COUNTY MEDICAL SOCIETY.

Carroll County Medical Society announces the following officers for 1923:

President—Dr. C. C. Fitts.

Vice-President—Dr. H. J. Goodwyn.

Secretary-Treasurer—Dr. D. S. Reese.

Delegate—Dr. D. S. Reese.

FULTON COUNTY MEDICAL SOCIETY.

Fulton County Medical Society announces the following officers for 1923:

President—Dr. H. R. Donaldson.

Vice-President—Dr. W. E. Person.

Secretary-Treasurer—Dr. Grady E. Clay.

ANNOUNCEMENT.

Dr. J. H. Chandler has been chosen City Physician of Swainsboro, Ga.

Dr. Bracken, surgeon in charge of Ashbury Veterans' Hospital, Minneapolis, Minn., has been transferred to Government Hospital, Atlanta, Ga.

Dr. P. M. Lewis, of Bainbridge, has been appointed by Gov. Hardwick to represent the State as a delegate to the congress of Medical Education and Public Health to be held March 5th to 7th in Chicago by the National Council on Medical Education and Hospitals.

Dr. O. C. Brannon leaves the intern staff of Grady Hospital to join the staff of City Hospital at Columbus, Ga.

Dr. W. M. Flanagan announces removal of his offices from Alma to Waycross.

Dr. Robert Battey Crichton announces his association with Dr. Marion T. Benson, 504-507 Atlanta National Bank Building. Gynecology and obstetrics.

Dr. J. H. Barkwell announces his removal from Route 9, Dublin, Ga., to Stearns, Ky.

Chiropractic Bill Dies in Carolina House.

The House of Representatives of Columbia, S. C., killed the so-called Chiropractic Bill February 1st, 1923.

The Seventh Annual Clinical Session of the American Congress on Internal Medicine will be held in the amphitheatres, wards and laboratories of the various institutions concerned with medical teaching, at Philadelphia, Pa., beginning Monday, April 2nd, 1923.

Practitioners and laboratory workers interested in the progress of scientific, clinical and research medicine are invited to take advantage of the opportunities afforded by this session.

Address inquiries to the Secretary-General.

SYDNEY R. MILLER, President,
Baltimore, Md.

FRANK SMITHES, Sec'y.-Gen'l.,
1002 Dearborn Street,
Chicago, Ill.

THE NARCOTIC DRUG MENACE.

Leading newspapers of America, with the co-operation of medical societies, educational groups, and civic organizations throughout America are attempting to check the alarming spread of narcotic drug traffic by drawing resolutions asking that the president of the United States (1) proclaim Anti-Narcotic Week in which the people may be educated to fight this evil; (2) that the president call an international conference on narcotics leading toward the suppression of this rapidly growing menace.

WHY?

BECAUSE: The narcotic drug habit has tripled in America in the past two years.

BECAUSE: The United States uses 40 times more narcotic drugs per capita than any other white nation, and 17 times more per capita than the Chinese, who have always been considered the drug drenched nation of the world.

DID YOU KNOW that dope peddlers have been caught recently plying a PROFITABLE business in Y. M. C. A.'s, on THE STEPS OF HIGH SCHOOLS and churches, at street fairs, and elsewhere?

The dope ring covering the United States and Canada is conducted along strictly business lines and shows steady determination to develop a market. The business is profitable, the penalties light and SELDOM ENFORCED.

REMEDIES: To cut off the supply at its source—the poppy fields of India, the cocoa plantations of South America.

HOW YOU CAN HELP: Indorse resolutions asking the president of the United States to call an International Conference to stamp out this evil, and to proclaim Anti-Narcotic Week.

NAVY ADOPTS NEOARSPHENAMINE.

The following letter of Rear Admiral E. R. Stitt, Medical Corps, United States Navy, was approved on August 17, 1922, by the Bureau of Medicine and Surgery, in charge of Rear Admiral W. C. Braisted, Washington, D. C., and published for the information of the medical officers of the United States Naval Service in the U. S. Naval Medical Bulletin, October, 1922.

To the Bureau of Medicine and Surgery:

"Subject: Recommendation that neoarsphenamine be substituted for arsphenamine in connection with use on board ships and at certain stations of the navy.

"1. I would recommend that the use of arsphenamine be discontinued on board ships of the Navy and in its place to substitute neoarsphenamine. This same recommendation would apply to stations and smaller hospitals.

"2. In the larger hospitals where facilities for the administration of arsphenamine are satisfactory, the choice between arsphenamine and neoarsphenamine should be left to the discretion of the commanding officer.

"3. This recommendation is made for the following reasons:

(a) In discussing fully this matter with the director of the hygienic laboratory he is of the opinion that most of the accidents attending the use of arsphenamine have been connected with errors in technic. In view of the simplicity of technic when using neoarsphenamine many untoward results would be eliminated.

(b) In the clinic of the Brady Institute, neoarsphenamine is used exclusively, and the staff and associates are unable to note any lessened therapeutic efficiency with this than when arsphenamine is used.

During December, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Powers-Weightman-Rosengarten:

Arsenobenzol-Billon.

Merck & Company:

Digitan Ampules (for Hypodermic use).

Digitan Ampules (for Oral Use).

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-Official Remedies:

H. A. Metz Laboratories: Novocain and L-suprarenin Tablets "H"; Novocain Solution, 1 per cent; Novocain Base; Novocain Nitrate; Pyramidon Tablets.

United States Radium Corporation: Ampules Radium Chloride 2 Cc—U. S. Radium Corp. (Radium element, 5 micrograms); Ampules Radium Chloride 2 Cc—U. S. Radium Corporation (Radium Element, 10 micrograms); Ampules Radium Chloride 2 Cc—U. S. Radium Corporation (Radium Element, 25 micrograms).

Winthrop Chemical Company: Ferro Sajodin.

BOOK REVIEW.

The Propaganda For Reform In Proprietary Medicines, Vol. 2, 1922. Containing reports of the Council on Pharmacy and Chemistry and contributions from the A. M. A. Chemical Laboratory and from The Journal of the American Medical Association. Cloth. Price, \$2.00. Pp. 603 with illustrations. Chicago: American Medical Association, 1922.

The present book is the second volume of the "Propaganda for Reform in Proprietary Medicines." The first volume ran nine editions. The ninth edition contained (1) the most important reports of the Council on Pharmacy and Chemistry, (2) the reports of the A. M. A. Chemical Laboratory, and (3) those articles from The Journal of the American Medical Association which deal with the problems of proprietaryship in medicine and the furtherance of rational drug therapy. All of this material covered a period prior to 1917.

The present (second) volume contains similar material covering the period from January, 1917, to April, 1922, inclusive. Like Volume 1, this volume is divided into four parts:

Reports of the Council on Pharmacy and Chemistry: This section presents the principles and rules which govern the Council in the examination of medicaments, contains articles and reports bearing on the work of the Council as well as the most important reports of the Council from 1917 to April, 1922, inclusive.

Reports of the A. M. A. Chemical Laboratory: This, besides presenting the aims and objects of the Association's Chemical Laboratory, also outlines some of the Laboratory's work which is of special interest to physicians.

Contributions from The Journal (Proprietary Products): This contains articles which have appeared in The Journal A. M. A. on proprietary preparations and their methods of exploitation.

Contributions from The Journal (Miscellany): In this section are articles dealing with matters of interest to the medical

profession but not coming strictly under the classification of proprietary medicinal preparations.

A comparison of the material that has appeared in Volume 1 of the Propaganda for Reform with that which appears in this volume will reveal the changing conditions in the proprietary medicine field. Many of the reports in the first volume brought out the fact that medicinal preparations were at that time foisted on the profession with false claims of composition; reports of this character are less conspicuous in the present volume. Many of the reports in Volume 2 deal with unwarranted therapeutic claims, especially those advanced for animal organ preparations, serums, vaccines, preparations for intravenous medication, etc. The present volume will also be found of interest in its portrayal of the changed conditions in proprietary medicines brought about by the World War.

The index in this new volume is, in effect, a bibliography, including references not only to articles in the book but also (a) to articles which appeared in Volume 1; (b) to articles on the same general subject in The Journal of the American Medical Association, and (c) to articles appearing in the annual reports of the Council on Pharmacy and Chemistry and of the A. M. A. Chemical Laboratory, but not printed in either volume of the Propaganda for Reform in Proprietary Medicines.

This book is not only valuable for the information it contains, but it is also interesting. It shows up the technique of the artist in the sale of proprietary medicines, tells of his skilful word-pictures that are sent to the physician as "literature." It makes clear the work of the Council on Pharmacy and Chemistry, the A. M. A. Chemical Laboratory and The Journal of the American Medical Association in their several capacities as servants to the medical profession and as champions of rational medicine. The book should be in every physician's library, and more than that, should be within reach for convenient reference.

BOOKS RECEIVED.

Endocrine and Other Organotherapeutic Preparations is the title of a booklet just issued by Armour and Company. This pamphlet contains articles upon the products that the title covers. A copy of it will be mailed to any physician or pharmacist who asks for it.

Physiology and Biochemistry in Modern Medicine, by J. J. R. McLeod, M. B., professor of physiology in University of Toronto, Toronto, Canada; formerly professor of physiology in the Western Reserve University, Cleveland, Ohio; assisted by R. G. Pearce, A. C. Redfield and M. B. Taylor. Fourth edition, 234 illustrations, including 9 plates in colors, 992 pages. Price, \$11.00. C. V. Mosby & Co., St. Louis, Mo.

MARRIAGES.

Miss Dorothy Haverty to Dr. Lon Woodfin Grove on Thursday evening, January 19th, Atlanta, Ga.

BIRTHS.

Dr. and Mrs. William Perrin Nicolson announce the birth of a son, William Perrin Nicolson III, Tuesday, January 16th.

OBITUARY.

Dr. H. Lattimer Rudolph, one of our best known pediatricians of this section, died at his home in Gainesville, January 30th of pneumonia.

Dr. Rudolph was 43 years of age, having been born in Gainesville, August 10th, 1879, and son of late distinguished Judge A. Rudolph and Mrs. Emma Lattimer Rudolph. His boyhood days were spent in Gainesville and his education was received in the Gainesville Public School and Parke High School of Lagrange, later going to Georgia School of Technology in Atlanta. Under the guidance of Dr. Bailey he started the study of medicine and later went to University of Maryland, where he graduated with high honor in 1902. Completing an internship in a hospital in Maryland, he returned to Georgia and took up the practice of his profession. He was associated with Dr. Bailey until his death in 1910.

Dr. W. H. Crowe, of Pavo, Georgia, age 52, was killed in an automobile accident February 4th. He was a prominent physician and his practice extended throughout that section.

The Best of Teachers

IT is an old saw that "experience is the best of teachers." Leaders in the financial and industrial world have frequently quoted this proverb while reminiscing on their successes.

The best advisors in the investment field are those who have had experience, those who have taken the time to analyze the highest grade securities.

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Volume XII

ATLANTA, GA., MARCH, 1923

No. 3

PERCUSSION OF THE HEALTHY CHEST.*

B. C. Teasley, M. D.
Hartwell, Ga.

If I am due an apology for bringing such an old subject before you today it is because of the tendency of the present day colleges and the medical profession as a whole to turn the mind and attention to the advanced and efficient laboratory side of diagnosis before exhausting the possibilities of their unaided senses. It is not uncommon for the teacher in our medical colleges or our best practicing physicians to refer to the laboratory cases that show any difficulty in diagnosis before having first tried the simple methods that were so essential to our early masters of clinical medicine. I hope no one will think for a moment that I am opposed to the more advanced methods of diagnosis. I very often send cases to the laboratory for help. In fact, without the aid of the x-ray, polygraph, blood chemistry, etc., we should be very much handicapped in our aids to diagnosis. This tendency in resorting to laboratory aids has caused less stress to be put on physical signs and consequently the young physician is not drilled sufficiently in detecting them. It is all right in large cities where you have group practice and access to well equipped laboratories, and above all where your patients have plenty of money; but the physician that comes to the small town not in touch with a laboratory and with patients that have very little money is up against a tough proposition unless he knows physical diagnosis. For this reason I am bringing this subject to your attention today.

We have six methods of physical exam-

ination, viz: inspection, palpation, percussion, auscultation, mensuration and succussion. Percussion, auscultation and succussion depend on the sense of hearing. In percussion the sounds are produced by tapping on the chest wall. In auscultation they are produced by the act of breathing, speaking and coughing. In succussion they are produced by splashing of liquids as the body is abruptly moved. These sounds are healthy or unhealthy and are known as physical signs. For the sake of brevity are very often called signs. Signs or physical signs are terms used in contradistinction to symptoms, the latter denoting the abnormal conditions that are detected by the patient and not by the examiner. Tapping on the chest wall and noting the sound produced is known as percussion. This may be direct or indirect. The direct method is seldom used. The ability to outline the right border of the heart is said to be a good test of one's ability to percuss. Dr. Hoover, of Cleveland, says that he can do this by direct percussion. I cannot and I do not believe the average practicing physician can.

The indirect method with the fingers as percussor and pleximeter is used probably about ninety-nine times out of one hundred. The instruments, percussion hammer and pleximeter, are used only in class demonstration where the sound is to be heard at a distance or where there is a large number of patients where the repetition of the blows renders the fingers tender and painful. One very important point in percussion is the resistance felt by the percussion fingers. The pleximeter finger should never touch two ribs or a rib and interspace at the same time. The palmar surface of the thumb, middle and ring fingers of the left hand should be used as

*Read before the Eighth District Medical Society, at Hartwell, Ga., August 9, 1922.

pleximeters. The thumb over the right apex, the ring finger over the left apex of the lung and the middle finger over the rest of the chest. The pleximeter finger should be raised from the chest wall so as not to deaden the sound. The plessor should be the middle finger of the right hand held at right angles at the second metacarpal joint. The wrist should be held perfectly loose, the blow being struck from the wrist and not from the elbow. We should strike a quick blow and remove the percussor finger as quickly as possible so as not to interfere with the vibrations of the tissues. The force of the percussion blow depends on our object of percussion. We should use strong percussion for a very muscular person, over the scapulae, over the mammary gland in the female and the deep areas of the heart and liver. For superficial percussion we use a very light stroke. The force of the blow in any one part and in comparing symmetrical parts of the chest should always be the same. Corresponding points on both sides should be compared, interspace with interspace and rib with rib. The sound produced when we strike on the chest wall may be resonant or nonresonant. The nonresonant sound may be divided into dullness or flatness. The resonant may be divided into pulmonary or vesicular as heard over the lungs, or tympanitic as heard over the stomach or intestines. In the supraclavicular space on the right side the pulmonary resonance is somewhat dampened while on the left there will be typical vesicular resonance. If we carry the percussion over the trachea the quality is changed to tympanitic. In the clavicular and infraclavicular regions we have typical and well marked vesicular resonance. It may be somewhat dampened on the right side. In the mammary region on both sides the pectoral muscles and in women the mammary glands dampen the typical pulmonary sound. In the lower mammary region on the right side the deep liver dullness causes a lessening of the resonance. On the left side at the lower border of the fourth rib and internal to the mammary line the

resonance is lessened by the deep dullness of the heart and over the superficial area of the heart the pulmonary resonance gives way entirely to the superficial dullness of the heart. At the lower portion of the mammary space at the anterior axillary line the quality becomes tympanitic from the stomach. In the axillary space on both sides we have typical pulmonary resonance down to the sixth rib. The vesicular resonance on the right side from the sixth rib down to the eighth is somewhat lessened on account of the deep dullness of the liver. From the eighth rib downward we have dullness from the superficial liver area. The left infra-axillary space is tympanitic anteriorly from the stomach and dull posteriorly from the spleen. Posteriorly the suprascapular and interscapular regions give a moderate pulmonary resonance. The scapular region on account of the underlying scapula is the least resonant of any portion of the pulmonary region. The infrascapular regions are more resonant than any other posterior portion of the chest but not as resonant as the anterior portion.

Our object in percussion of the chest is to outline the different organs of the chest and to detect their density. The patient should be standing, sitting or lying down.

Technic of percussion of the lungs: We should begin at the upper edge of the clavicle and percuss upward as far as we get pulmonary resonance which corresponds with the height of the apices of the lungs. We should then compare the two sides. Then percuss and compare the first, second and third interspaces on each side from sternal edge outward. We should then percuss down the mammary lines to the fourth interspace on the right side using strong strokes where we find the deep liver dullness. From this point down to the sixth rib by gentle percussion the vesicular resonance gives way to the superficial dullness of the liver which is the lower margin of the lung on this line. On the left mammary line the normal vesicular resonance gives way to the superficial dullness

of the heart at the lower border of the fourth rib. A little to the left of this point on the same level strong percussion gives a somewhat tympanitic resonance due to the left end of the stomach which mingles with the lung resonance. Gentle percussion from this point downward gives vesicular resonance to the sixth rib where the quality changes to tympanitic and marks the lower border of the left lung and the beginning of Traube's semilunar triangle. In women with large mammae we should begin at the clavicle and percuss downward to the fourth rib and then backward to the eighth rib in the midaxillary line. On the sides we should percuss downward on the midaxillary line to the eighth rib where normally the vesicular resonance gives way to the superficial dullness of the liver. Posteriorly we should percuss from the upper part of the chest downward to the tenth rib on the scapular line. The lower border of the lung will be shown by dullness of the liver on the right side and the spleen and kidney on the left side.

Tasker Howard has called attention to a dullness in health due to the lateral position of the chest. There is an area of dullness next to the mattress due to the deadening effect of the mattress and at the base due to the higher level of the diaphragm and the weight of the body. On the upper side is an area of dullness due to the crowding together of the ribs.

Technic of percussion of the heart: The object of percussion of the heart is to find its shape, size and location. There are two areas of dullness of the heart, superficial and deep. There are two methods of percussion, ordinary and threshold. In using either method the lines of percussion are the same. In percussion of the heart we must not expect a sudden change in the pitch and quality of the sound but must be on the lookout for the first change or lessening of the resonance in passing from the resonant to a non-resonant point, or increase of resonance in passing from a non-resonant to a resonant point. To find the deep dullness of the heart by ordinary

percussion we use heavy strokes beginning at the second interspace on the right side at the parasternal line and percuss downward until the dulling effect of the upper border of the liver is found which is generally at the fourth interspace or the fifth rib and then downward until the superficial dullness of the liver is found which is about the sixth rib. We should then percuss from right to left in the fourth and fifth interspaces noting the first change of impaired resonance. We should then percuss down the left mammary line and then from left to right in the third, fourth and fifth interspaces noting the first impairment of resonance. To find superficial dull area continue the percussion further to the left in the fifth interspace noting when the resonance gives way entirely to absolute dullness and further to the right in the fourth and fifth interspaces and from above downward on a line about one inch to the left of the sternum. The entire lower border of the heart can not be made out on account of the dullness of the left lobe of the liver merging into it. The same applies to the upper border on account of the great vessel area.

In threshold percussion the end and middle phalanges of the middle left finger should be kept at right angle to the rest of the finger. The stroke must be made on the angle end of the middle phalanx very gently, so that the sound is barely heard with the ear close to the percussion in very quiet surroundings on a tympanitic area and when we get on a dull area the sound should not be heard.

Technic of percussion of the liver: There are two areas of dullness of the liver, the deep and superficial. There are two methods of percussion, the ordinary and threshold. In either method the same lines of percussion should be followed. On the right we should begin on the second interspace on the mammary line, the fourth interspace on the midaxillary line and at the lower angle of the scapula and percuss downward with heavy strokes noting the first impairment of resonance which denotes the upper edge of the liver. Normal-

ly this will be the fourth interspace on the mammary line, the seventh on the mid-axillary line and the ninth on the scapular line. By comparing interspace with interspace and rib with rib, the upper border can be very accurately located.

To find the lower border we percuss upward on the same lines beginning below the costal edge using very gentle strokes which are just within the threshold of audibility. When we reach the liver dullness the sound will not be heard. In front this will be about three and one half to four inches below the ensiform, in the mammary line about costal edge, in the mid-axillary line about the tenth interspace and at the scapular line it fuses with the dullness of the right kidney.

Technic of percussion of the spleen: Percussion of the spleen is of very little importance. The patient should be sitting, standing or in the recumbent position midway between the dorsal and right lateral posture. To find the anterior limit we should begin at the costal margin on the left and percuss along the tenth rib until the stomach resonance gives way to dullness which is normally at the midaxillary line. To find the upper border we should begin on the level with the lower angle of the scapular about half way between the posterior axillary line and the scapular lines and percuss downward until the vesicular resonance is impaired which is about the ninth rib. To find the lower border begin below in the same line and percuss upward until the tympanic resonance gives way to dullness which is about the eleventh rib. To find the posterior border begin strong percussion at the midspinal line and percuss along the tenth rib. The splenic dullness should begin about one and one half inches from the midspinal line.

In conclusion will say that a musical ear is a good asset to the percussor but is in no wise essential. Some of the best percussors that I have ever seen have been men who could't distinguish high "do" from low "do." I do not wish to underestimate the value of the recent aids to diagnosis, still I am a firm believer in the supremacy and

superiority of the old time honored methods of physical examination, viz: inspection, palpation, percussion, auscultation, mensuration and succussion. To be expert in percussion takes patience, time and practice. Many physicians never become expert enough to place any dependence upon it. Those who do have many advantages over those who do not and will be able to avoid many mistakes in diagnosis.

TREATMENT OF RUPTURED APPENDIX FROM ILLUSTRATIVE CASES.*

Edgar H. Greene, M. D.

Atlanta, Ga.

The operation for uncomplicated appendicitis is usually considered nowadays as a fairly easy one, and the post-operative treatment barring complications quite simple, but in cases where at operation the appendix is found ruptured, or is ruptured by the operation, then the problem is quite different and far more difficult to handle, with a subsequent period of treatment that is worthy of serious consideration.

In presenting this paper I make no claim of originality or introduction in the basic principle of this form of treatment.

Several case records have been selected to illustrate the treatment outlined and following is the general plan with certain individual variations that may be of interest: (These observations were made from cases, the majority of which were diffuse peritonitis with exudate, but the principles of the treatment outlined here are used in all cases of ruptured appendix.)

Operation

Unless positively contraindicated I believe ether is the best and safest anaesthetic. Novocain alone, or in conjunction with nitrous oxide and oxygen, is frequently used. (The Anoci Association of Crile). Whatever the anaesthetic, it should be administered by one skilled in the art and upon whom the responsibility for it can be

* Read before the Chattahoochee Medical Society, 1922.

placed unreservedly. The surgeon has before him enough to occupy his undivided attention, and the patient is entitled to the maximum of his surgical ability.

The right rectus incision is preferred because it is easy and can be rapidly done, may be of small size or quickly enlarged; it affords ample drainage facilities and offers no more possibility of hernia than any other incision.

Upon opening the peritoneal cavity, the cecum should be quickly located, the appendix delivered and removed. An effort should be made to prevent the spreading of the pus. Unusual care and gentleness should be practiced at this stage of the operation, for rough or unnecessary handling will often produce shock and a very stormy convalescence.

Should the appendix be found adherent to adjacent structures, or if there is a softened condition of intestines forming an abscess wall, or there is a retrocecal position causing difficult and tedious removal, the after results are certainly more gratifying, if the manipulations are immediately discontinued and the abdomen closed with ample drainage. The appendix to be excised at subsequent operation.

Drainage

In either instance, whether the appendix is or is not removed, the drainage is the same. Two moderately large rubber tubes placed so that they reach the region of the abscess cavity usually suffice. They may be removed on the fourth or fifth day, for at that time a sinus is usually well formed and drainage will not be hampered. A cigarette drain is sometimes used in conjunction with the tubes, and is usually removed within 24 hours. This type of drainage, if left in after that length of time seems to become an obstruction rather than the desired open passage-way, and for that reason the plain rubber tubes are preferable.

A plain gauze drain is not used for the reason, (1) that the removal is more painful to the patient, (2) that more irritation may be produced when released from its bed and very often causes fecal

fistula, and (3) that it promotes no better drainage than the ordinary cigarette drain.

General Post-Operative Treatment

Stimulation: During the operation if the patient shows a tendency toward shock or even a slight depression, normal saline solution, 500 to 700 c. c., is administered intravenously at once. This procedure is repeated once or twice daily until the condition of the patient warrants its discontinuance. In addition to this, an alkaline solution of soda, glucose, and normal saline is given twice daily by proctoclysis. The injection of the fluids strengthens the patient, dilutes the toxins and combats acidosis.

In those individuals who show no shock or depression, the latter method alone (i. e. alkaline proctoclysis) is used. If profound shock occurs, whether it be from loss of blood or purely surgical shock due to the peculiar nervous phenomena that we occasionally see there is probably nothing better than an immediate blood transfusion which should be repeated as often as necessary.

Posture: The patient should be placed in a warm bed in the sitting posture or as nearly so as can be consistently arranged for comfort with the right side slightly lower than the left. With reasonable care the patient can be quite easily and comfortably arranged in this position. This serves several purposes as follows: The principle of gravity is adhered to and free drainage is promoted; the diaphragm is unimpaired and the patient breathes easily; the lymphatics of the upper abdomen are not forced into the performance of an undesirable and unnecessary duty, the burden of absorption being relegated to the pelvic lymphatics which by nature were prepared for just such conditions.

Opiates. Mental Condition.

Morphine, hypodermatically, should be given every four hours while the patient is awake. This not only alleviates the pain and keeps the patient quiet, but it halts peristalsis and gives the injured intestine a reasonable form of immobile

support. After 48 hours the morphine can be greatly decreased or entirely discontinued. It is no uncommon occurrence to observe in some cases an expression of anxiety and perhaps fear, and this appearance of depression should not be treated carelessly. Everyone should "boost" the patient and strive to bring about a spirit of optimism and cheerfulness. The mental condition is a most important factor.

Diet

Care of the Intestinal Tract: During this time nothing is given by mouth except a small amount of fruit juice and water. This does not cause gas formation, as some people seem to believe, but if free liquid diet is permitted, which includes broths, considerable abdominal distention readily appears. No food is given until after the bowels move well, and a free bowel movement often takes place without the aid of cathartics or enemata, if the alkaline proctoclysis is kept up two or three days. If, however, there is an accumulation of gas, there should be no hesitancy in giving a low enema, which should be repeated within two or three hours, if necessary. The patient is given special soft diet usually on the third post-operative day.

Care of the Wound

The wound should be dressed daily so that it is thoroughly cleansed, the line of the incision above the sinus protected, and the drainage deodorized as much as possible. An excellent solution for the dressing is dichloranine T, although there are other solutions that give very gratifying results,—i. e. Wright's salt pack; Ichthyol 10 per cent in glycerine.

The occurrence of a fecal fistula is not uncommon. The treatment, however, is the same, and for a few days the dressing should be changed twice daily. These cases usually heal without complications.

Convalescence

The patient should be gradually lowered from the sitting or elevated position so that the level position is attained within

about three days. The condition of the drainage should be the guide to begin lowering the patient. The suitable time usually occurs about the eighth to the tenth day.

The skin suture is removed about the tenth day, but the silkworm gut tension sutures are left in for fifteen to twenty days. This may be an unnecessarily long time, but upon abdominal examination of these cases several months after the operation the integrity of the muscle wall has been so satisfactorily preserved that I would hesitate to discontinue the practice of late removal of the deep sutures.

The patient should be given a back rest, ordinarily from fifteen to twenty days after the operation, and two or three days later allowed to sit in a chair.

No fixed rule can be applied, of course, as the drainage condition and degrees of wound healing vary to such extent in the different cases that every one presents the possibility of an individual problem.

The subsequent treatment, after the patient becomes ambulatory, should include instructions in exercise and general care similar to that following ordinary laparotomy.

Summary

1. The operation should be done early and as rapidly as possible.
2. The anesthetic should be carefully selected and administered by one thoroughly qualified.
3. Free drainage should be established and subsequently aided by placing the patient in bed in the exaggerated "Fowler's", or better, in the sitting position.
4. Blood transfusion is our greatest asset in stimulating the patient and combating shock—saline infusion is next best. The use of alkaline proctoclysis for 48 to 72 hours is invaluable.
5. Morphine should be liberally and regularly used during the critical hours following the operation.
6. Well selected diet; proper attention to the intestinal tract.
7. Careful and systematic dressings until the wound is completely healed.

PEMPHIGUS CONJUNCTIVAE; REPORT OF A CASE.*

Cecil Stockard, M. D.
Atlanta, Ga.

I will begin my paper with the following description of pemphigus of the conjunctiva copied verbatim from Fuchs (1).

"In this rare disease the conjunctiva, although reddened as a whole, displays one or two spots that are deprived of their epithelium and covered with a gray coating. While these spots are slowly undergoing cicatrization—a process attended with shrinking of the subjacent conjunctiva—spots of the same nature appear in other places. Thus there is produced a constantly increasing cicatricial contraction of the conjunctiva, whose progress, it is true, is very slow (extending over months and years), but is irresistible. The conjunctiva becomes whitish, cloudy, and tense. First, the retrotarsal folds vanish, then folds make their appearance, stretching from the lids across to the eyeball, and finally the lids are drawn in so that trichiasis results. The conjunctiva at the same time grows continually drier, and the lachrymal secretion dries up, owing to the fact that the excretory ducts of the lachrymal gland becomes occluded by the shrinking of the conjunctiva.

"Ulcers form upon the cornea, which later gets to be clouded all over, and likewise dry upon its surface. In the bad cases the lids at length become completely adherent to the eyeball, so that the cornea is permanently covered by the lids and the eye is incurably blind (symblepharon totale). Hence, the prognosis of pemphigus is very unfavorable—the more so as both eyes are always attacked. [The cornea may remain intact for a very long time (even twenty years), and the disease itself may remain stationary for as long as sixteen years. (Buck). One disagreeable symptom is the overpowering fetor that often accompanies pemphigus (Stieren)—D.]

"In pemphigus of the conjunctiva, con-

trary to what happens in pemphigus of the skin, bullae are only exceptionally found, their place being taken by denuded areas in the conjunctiva. This is explainable from the anatomical character of the latter. Its epithelium is so soft and delicate that it cannot, like the epidermis, be lifted up in broad layers by serous exudation, but ruptures and is thrown off in the form of shreds, so that only as an exception do we chance to see vesicles, and these very small. The raw spots upon the conjunctiva produced by the rupture of the vesicles soon become covered with a gray coating, as is so frequently the case in wounds of mucous membranes.

"A further distinction between pemphigus of the conjunctiva and, indeed, of the mucous membranes generally, on the one hand, and pemphigus of the skin, on the other, consists in the fact that the process in the mucous membrane, in correspondence with the more delicate structure of the tissue, goes deeper in and hence leads to scar formation, while the pemphigus vesicles of the skin heal without leaving scars behind.

"Pemphigus of the conjunctiva is rarely found in conjunction with eruptions of pemphigus upon the skin. More frequently there exists with the pemphigus of the conjunctiva an analogous affection of the mucous membrane of the throat, mouth, or nose. In these localities the pemphigus runs a course like that in the conjunctiva and may, particularly in the buccal cavity, lead to shrinking of the mucous membrane, and thus to stenosis of the mouth. But it may also happen that a lesion of the kind just described exists in the conjunctiva without pemphigus being present elsewhere in the body. That such cases as these, which were first described by von Graefe as essential phthisis of the conjunctiva, are also to be ascribed to pemphigus, is not certain, though probable.

"Treatment has usually no power to restrain the process. Arsenic is administered internally for the pemphigus; and to make the patient easier, mucilaginous remedies are instilled into the eyes as in xer-

* Read before the Medical Association of Georgia, Columbus, Ga., May 3-5, 1922.

ophthalmus. [A number of these cases are associated with syphilis, and in these antiluetic treatment may be given, although, as a rule, with little prospects of success.—D.] Transplantation of pieces from another mucous membrane into the conjunctival sac may be tried in order to replace the conjunctiva that has been destroyed."

According to the American Encyclopaedia of Ophthalmology (2) this disease may occur at any age. In 28 cases collected by Morris and Roberts the youngest age was 4 years, and the oldest 76 * * * In 28 per cent of these cases the disease is said to have attacked the conjunctiva primarily, but it is probable (says the writer in the encyclopaedia), that in such cases the cutaneous lesions were overlooked. Careful examination and observation would be of great value in establishing the correctness of this disputed question, as to whether or not the cutaneous lesions always precede the ocular complications.

Rowland (3) gives an interesting case report in which he says that his patient during observation showed no lesion of the skin or of the mucous membranes of the nose or mouth, and no vesicles or bullae in the eye. This case progressed from first symptoms of irritation to xerophthalmus in 18 months in spite of treatment and good general health. This is the only new case reported in American or available European literature since Posey (4) reported his case 2 years ago before the section on Ophthalmology of the College of Physicians at Philadelphia.

In speaking of the rarity of the disease Posey says that in the past 28 years he has observed approximately 75,000 patients, and the reported case is the first one that has come under his personal care. He quotes figures from various clinics in other countries which seem to show that the disease is rather more common in Europe than here.

In discussing Posey's case Shumway (5) spoke of the question of identity of essential shrinking of the conjunctiva and pemphigus, and said originally they were held

to be separate conditions, but that most authorities, especially eye-surgeons, now considered them identical, though many dermatologists disputed this view.

Parsons (6) says, "One of the earliest cases of pemphigus of the conjunctiva was published by White-Cooper (1858), before that date, and since also, it has been confused with xerosis. It was described as *sindesmitis degenerativa* by Stellweg (1870) and as *essential shrinking of the conjunctiva* by Kries (1878) of von Graefe's clinic. Von Graefe (1879) propounded the identity of pemphigus and essential shrinking, whilst Becker (1879) admitted only the identity of the latter with *sindesmitis*. Von Graefe's view is now generally accepted (Fuchs and others)".

Two very interesting and unusual features are shown in a case recently presented by W. C. and W. M. Bane (7). First, the right eye was not affected until seven years after the left eye. Second, the progress of the disease was apparently arrested in the left eye by a conjunctival graft and x-ray treatment. This last had no effect on the right eye, however, and it has progressed to total blindness during the past seven years, while the left eye has retained corrected vision of nearly 20/20.

Stieren (8) in a most excellent article quotes Adam (9) on the pathology in part as follows: "The shrinking of the conjunctiva he finds is not due to plastic adhesions of ruptured vesicles in the supporting basal membrane, but to cicatricial changes in each nest of infiltration. The bulbar conjunctiva soon becomes tightly adherent to the sclera at the site where nodules occur, with a shrinking of the same, while the palpebral conjunctiva retains more or less of its laxness. This results in the formation of vertical folds in the conjunctiva of the cul-de-sacs which look like adhesions or symblepharons, and can be mistaken for such." Stieren also gives a very complete bibliography.

Case Report.

Mr. J. A. C. aet. 61 came to see me in June, 1921, complaining of dryness of the eyes, and relative immobility of both

globes and lids. Briefly his history is as follows: Eight or nine years ago he had a sore throat, and has had throat trouble off and on ever since, complaining chiefly of a feeling of dryness. One year ago he had an infected hand, and his eyes have been failing since that time, the lids becoming more and more firmly attached to the globe, which interferes greatly with all ocular motions. No particular complaint of pain. He was for years foreman of a railway road gang, and for some time past has been a rural mail carrier.

Examination: Corneae clear, O. D. almost entire lower lid adherent to the globe, bands of adhesions extend from the upper lid to the globe but the middle third of the margin is free, although there appear to be some adhesions farther up behind the lid. O. S. condition same, except not quite so far advanced, conjunctiva O. U. dry looking, some shreds of mucus, no bullae or other evidence of active trouble. Nose shows nothing of significance.

Throat: Uvula rudimentary, two whitish patches, one extending up and to the right from the uvula, and another on the upper portion of the right anterior pillar. They were about 10 mm. in diameter, and their nature was not determined.

There were some adhesions around the tonsils, the right especially, somewhat resembling in appearance the ocular adhesions.

When seen again several weeks later the eye condition was apparently unchanged, and the spots in the throat had disappeared, leaving no sign.

I have not seen him since October, but am told that the condition remains about the same, except for some pain, probably due to a slight trichiasis.

507 Candler Bldg.

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INTERESTING EXPERIENCES IN CATARACT EXTRACTION AMONG CONFEDERATE VETERANS.*

Murdock Equen, M. D.

Atlanta, Ga.

A brief resume of the origin of this operation which has meant so much for mankind thus afflicted will, I think, prove interesting to the members of this Association.

It was in 1708 that Jean Louis Petit, a French surgeon, first opened the cornea to remove a cataract which had been dislocated into the anterior chamber. Extraction of cataract though began with Jacques Daviel, a French surgeon, about the middle of the 18th century. Until 1745 cataracts were operated on by the couching methods, that is, instead of removing the opaque lens from the eye as we now do, it was pushed into the lower part of the vitreous chamber. A hermit, who previously had lost one eye by the couching method, consulted Daviel at Marseilles in 1745 regarding the other eye. Daviel decided to try the technique of Petit and opened the anterior chamber with a curved needle, afterwards enlarging wound with a pair of scissors. The contents of the anterior chamber escaped leaving the pupil so clear that the patient was able to distinguish objects held before him. Later however, the eye was lost by infection. Although unsuccessful in this case, Daviel determined to remove cataracts through an opening in the cornea. His first successful operation was on a woman. Daviel's technique later was modified by himself but after 1850 the displacement or couching operation, had in every country given way to the more brilliant method of Daviel.

This article is based upon our experience in cataract extraction among the inmates of the Georgia State Home for Con-

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federate Veterans. All of our cases had passed the age of eighty and had necessarily the accompanying cardio-vascular changes. Careful physical examinations were always made, but we found that there were few pathological conditions existing which made cataract extraction an actual contra-indication. For instance, one of the cases was 84 years of age and had suffered from chronic diarrhoea for the past thirty years. At the time of both of his operations he was having from 10 to 15 movements a day. Treatment was of no avail and extraction of both lens was done with an uneventful recovery, regardless of his diarrhoea and of his refusal to remain in bed. In arteriosclerosis there is always the fear to the surgeon of an expulsive hemorrhage from the choroid and practically all of our cases have suffered from hypertension. One of the cases, an old retired physician, by the way, whose blood pressure had been over 180 for years, stood an extraction of both lens without the slightest complication. Several of our patients have been diabetic and yet healing has taken place normally regardless as to our fears that it would probably do otherwise.

Time to Operate: The best stage to operate is in the mature stage. At this time the lens is easily separated from the capsule and comes out in one mass.

There is an urgent demand by those having immature cataracts that something be done. The long wait normally required before their lens become sufficiently sclerosed for extraction, offers little hope for them and may mean in private practice the loss to the community of one of her most valued citizens; or should the patient be the bread-winner for others, little imagination is required to see the mental depression that these patients would be subjected to over such a prospect. We have found that a preliminary iridectomy combined with the massage of the lens seems to hasten materially the maturing of these cataracts.

It is not wise to extract a lens from an eye with a vision exceeding 1-40 of the

normal. When the patient's only hope of vision is centered in one eye no chance whatever should be taken as to the leaving of soft lens material behind, which may later develop into a secondary cataract, with its accompanying numerous disadvantages. This condition would be quite probable were the cataract not matured.

There are some who advocate extraction of both lens at the same time; stating that this means only one operation and one course of after treatment, but we consider such a procedure the height of folly. Should any unpleasant complications arise, both eyes would in all probability be lost, whereas if only one eye had been operated on such an experience would prove of value at the subsequent operation.

In all cases of cataract operation useful vision is to be expected only where the retina and optic nerve are normal. Because of this their function should be tested as regards perception and projection of light.

There should be no thought of operating for cataract on an eye so long as there exists any active inflammatory condition of either the globe or its appendages. This is especially true when the lachrymal apparatus is involved. A bacteriologic investigation of the apparently healthy conjunctiva should always be made, as an incipient infection has frequently been revealed which necessitated the postponement of the operation until the secretions were normal; thus perhaps preventing a panophthalmitis.

Position of Patient: Experience has shown that patients get along much better following cataract operations if they can be left perfectly quiet. Because of this our extractions have been performed in a special bed, the height of it being the same as the usual operating table.

We have a room admirably fitted for this kind of work such as to light, ventilation, etc., and after the operation all instruments, basins, tables, and other articles used are taken out and the room converted into a bedroom. Thus it will

be noted that the patient has not been subjected to any strain whatever as to either moving himself or being moved. Not infrequently surgeons have noted that all may go well at the time of operation only later to find much to their chargin that there has been a prolapse of the iris with an accompanying loss of vitreous. Such disastrous results having been caused by the squeezing of the eye operated upon which the patient had done unconsciously.

Preparation of Patient: As a matter of routine practice a laxative is administered the night previous to operation. A little beforehand training of the different acts which the patient will be expected to perform during the operation, we have found will be highly advantageous. I refer to the patient becoming accustomed to the manipulations of the lids, rotating the eye in the various directions, opening and shutting them.

Preparation of the Eye: About two hours previous to operation it is our custom to instill two drops of atropine 1 per cent to be followed by another one an hour later. This secures ample relaxation of the iris, whereas the indiscriminate or prolonged use of atropine, especially with those the age of our cases, is liable to cause glaucoma. Just previous to the operation the entire face, from the hair to the neck, should be carefully scrubbed with sterile green soap and hot sterilized water. Careful attention must be paid to the cilia and lids. If too long the cilia may be shaved, otherwise dampened with benzine. The patient is next put in a reclining position and the eye copiously irrigated with a lukewarm solution of boric acid, being sure that the lids, part of the time, are everted. Special care should be taken in order that the cornea be not injured; as the removal of a patch of epithelium leaves an unprotected area especially liable to infection. Ten minutes previous to operation cocainization is commenced with a 4 per cent solution, four drops being used at two minute intervals. Between the cocaine drops the adrenalin solution (1-1000) is used in a similar amount.

Choice of Operation: The writer has found that in the fully matured cases the iridectomy and extraction done at the same time, or the combined operation insures a safer course than the preliminary iridectomy first with an extraction later. All of our cases as previously mentioned were over eighty and it was deemed unwise to subject them to any more surgical procedure than absolutely necessary.

Operation: The lid speculum is now placed in position and the eye again irrigated with warm boric solution. Before proceeding with operation it is desirable to see that cocainization is complete and the sensitiveness of the cornea tested. The position of the surgeon is a matter of personal choice, but the writer has found that standing at the head of the patient and using the right hand for the right eye and the left one for the left eye has numerous advantages. Should the surgeon not be ambidextrous in operating on the left eye, it will be necessary for him to stand on patient's left side and cut upward.

Fixation: This is a most important step as it is the only satisfactory means of controlling the eye ball during the operation. For this purpose we use forceps having broad jaws and without a catch or lock. The idea of the absence of the lock is that it may be necessary on account of the behavior of the patient, or some other complication, to stop operating at once and the surgeon cannot be impeded by a catch of any variety.

Puncture: This should be made exactly at the sclero-corneal junction at the outer extremity of a horizontal line which would pass three or four mm. according to the size of the cataract below the summit of the cornea. The knife is now carried across the anterior chamber to a corresponding point upon the opposite side and the counter puncture made. The corneal section when once commenced must be finished; there can be no starting over again. The knife is pushed steadily onward as far as possible and with an upward tendency the section is completed with a free cutting, not a sawing or dragging

movement. At this stage some operators remove the speculum, but we prefer leaving it the entire operation.

Iridectomy: Should this not have been done previously the patient is asked to look downward and the iris grasped at its pupillary border. The iris should be pulled upward and a small portion cut close to the cornea. The pillars of the coloboma should now be carefully smoothed out with a delicate spatula.

Capsulotomy: The operator now steadies the eyeball with the fixation forceps with one hand, while with the other he introduces the cystotome held flatwise during its insertion, passing it to the bottom of the coloboma. Its cutting edges inclined to each other are made like the limbs of the inverted letter V together with a transverse cut at its periphery.

Delivery of Cataract: Patient is requested to look downward and assistant raises speculum so that its blades do not exert any pressure on eyeball but holds the lids away from the eye. A cataract spoon is now laid against the inferior portion of the cornea and firm but gentle pressure made causing the upper margin of the lens to appear in the wound. The lens is caught in another spoon which has been held in opposite hand and which has exerted a downward pressure on scleral portion of corneal section. As soon as the major portion of the lens is delivered this pressure above and below is ceased and the cataract removed with a sweeping motion from below.

Toilet of Wound: After delivery of lens there quite frequently remains a certain amount of cortical material, tags of lens, capsule and blood clot the result of hemorrhage from the iris. For this reason we have found that our best results have followed the irrigation of the anterior chamber and for this purpose we use a specially devised syringe, which is introduced between the lips of the corneal wound, and a solution of distilled water containing one-half of one per cent sodium chloride inject-

ed. The irrigating fluid should be injected from within outward and not the reverse lest particles of blood and cortex be driven inward.

General Inspection: The conjunctival sac is now examined to see that there remains no foreign bodies, such as blood clots or cilia. The condition of the wound should be noted, making sure that its edges are nicely coapted and that the pillars of the coloboma are as straight as possible, no part of iris having been caught in the margin of the wound.

Dressing: Two drops of atropine are now put in eye with a liberal amount of bichloride vaseline (1-3000). An oval piece of soft lint soaked in a solution of boric acid is placed over each closed lid. Over this is placed a larger piece of sterilized cotton extending from above the eye down to the lower margin of orbit. This is held in position by adhesive strips and a figure 8 bandage applied. The entire dressing is now covered by a Ringers Mask which fits closely, preventing patient from putting fingers under bandage.

After Treatment: The dressing need not be removed at the end of 24 hours provided there has been no discomfort, no headache, or symptom to indicate that there has been an anomaly in the course of healing. On the other hand, if the dressing has become disarranged or the patient uncomfortable, an immediate inspection of the wound is made. No complications having arisen cases are inspected at the end of 48 hours. The amount of time patients are kept in bed following this operation varies to a marked extent; some surgeons being far more conservative than others. We have found that long confinements to bed makes these elderly patients very uncomfortable and they frequently become slightly delirious. This recumbent posture too long maintained also leads to a hypostatic congestion of lungs. Therefore it is our custom to allow these soldiers to sit up in bed the second day, permitting them to get up the third day. We were inclined

at first to keep them in bed longer, but the following experiences showed that such a procedure was hardly necessary. One of the old men missing his pocket book from under his pillow was found three hours after his operation crawling on the floor looking for his money. Two other cases soon after their operation rolled out of bed. For some unknown reason no bad results followed.

The writer has attempted not to overburden his hearers with a minute description of this operation, mentioning only its salient features and giving some of his very interesting experience with our beloved Confederate Veterans whose ranks are fast thinning.

401 Grand Opera House.

VERNAL CONJUNCTIVITIS.*

(Spring Catarrh. Conjunctivitis Aestivalis). Some New Observations
On Treatment.

A. G. Fort, M. D.

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Definition: Vernal conjunctivitis is a disease of the conjunctiva of the lid and globe, characterized by the formation of papillae on the conjunctiva of the tarsus often assuming "cobble stone" appearance, and by gelatinous elevations on the conjunctiva of the eye ball, surrounding the cornea, giving a brownish appearance to the globe. These elevations either surround the cornea or may be seen at any location along the limbus. The disease has a tendency to periodicity.

This disease is relatively rare although we have nineteen cases for study.

Many of these cases returned year after year about the same date and our results from treatment were uniformly poor. This led us to begin the further study of it as compared with hay fever.

POINTS OF SIMILARITY.

Vernal Conjunctivitis.

Periodicity: Recurring in Spring or Fall. Eosinophiles usually found in smears from conjunctiva. Eosinophilia always in blood. Usually in children.

Hay Fever.

Periodicity: Recurring in Spring or Fall. Eosinophiles usually found in smears from conjunctiva. (See 1.) Eosinophilia in blood. Usually in adults.

In the study of hay fever we find practically every author agrees that pollen plays an important part and that the cutaneous tests will often reveal the group responsible for the attack.

So unsuccessful had been our treatment with the different therapeutic agents recommended in the treatment of vernal conjunctivitis and so similar in many respects were hay fever and this disease we decided to try out the diagnostic methods suggested by the American Hay-Fever Prevention Association (Reprint No. 545, Public Health Report, Aug. 1, 1919. Treas. Dept. U. S. Public Health Service) and to use the pollen extract where tests were positive and in other cases in order to build up their resistance to pollens.

The cutaneous tests were made as follows: Scrub an area 1 in. by 1 in. on forearm then remove with sterile needle a small area of epidermis. Make three small abrasions, one for the Spring pollen, one for the Fall and one for control. It takes only ten minutes to get skin reaction. This was done in six cases with result we got positive for Spring pollen in five and positive for Fall pollen in four. We administered small doses, gradually increasing, of the Spring pollen extract to five with improvement in each case. We also administered Fall pollen extract to four with marked improvement in three cases. One did not return.

Attached is table showing results of investigations in vernal conjunctivitis with the exception that intestinal parasites were never found.

1. Brown Pusey. Journal A. M. A. October 7, 1911.

NOTE:—See table on the following page.

* Read before staff at (colored) Grady Hospital, Oct., 1921.

C. No.	Age	Sex		Color		Eosinophiles		Cutaneous Test		Inoculations		Results
		Male	Female	White	Black	Smear	Blood	Spring	Fall	Spring	Fall	
C. No. 45141	7	✓		✓				+		Many		Very marked improvement
C. No. 43890	4	✓			✓	+	13%	+	+	3		Improvement
C. No. 39255	4	✓			✓	+	6%	+	+	3		Improvement
C. No. 37865	4	✓			✓	+	7%					
C. No. 29254	6	✓			✓		8%					
C. No. 44512	7		✓		✓		8%			4		Improvement
C. No. 44286	8		✓		✓	—	9%			1		Improvement
C. No. 39049	5		✓		✓	—	2½%					
C. No. 38713	7		✓	✓		—	16%					
C. No. 38512			✓		✓	+	5%					
C. No. 37840	3		✓		✓	—	6½%					
C. No. 37449	7		✓		✓	—	5%					
C. No. 33033	5		✓		✓	+	4%					
C. No. 10127	2		✓		✓	+	3%					
C. No. 50093	9	✓			✓			+		✓	+	
C. No. 51352	12	✓			✓			+	+			Cured. 4 + Wassermann
C. No. 24054	21 Mos.	✓			✓							
C. No. 52285	9	✓			✓					✓		Improvement
C. No. 54597	11		✓		✓				+		+	Improvement
Total		9	10	2	17			5	4			7 Improvement. 1 Cured

Table accompanying paper of Dr. A. G. Fort,

SYPHILIS AMONG THE INSANE— FURTHER OBSERVATIONS.*

George L. Echols, M. D., State Sanitarium,
Milledgeville, Ga.

From January, 1918, to June, 1922, on routine admission to the Georgia state sanitarium, we have found 857 positive blood Wassermanns, and 310 positive syphilitic spinal fluids. Of the positive spinal fluids twenty-one showed a negative blood Wassermann. Of our admissions about 18 per cent showed positive blood Wassermanns, more than 7 per cent showed positive spinal fluids and 6.7 per cent of positive spinal fluids were associated with negative blood Wassermanns.

The above was as follows as to race and sex:

W. M. Pos. blood Wassermann 195. Pos. Sp. Fl. 96 or 49 per cent.

W. F. Pos. blood Wasserman 123. Pos. Sp. Fl. 11 or 9 per cent.

C. M. Pos. blood Wassermann 293. Pos. Sp. Fl. 151 or 51.5 per cent.

C. F. Pos. blood Wassermann 249. Pos. Sp. Fl. 52 or 21 per cent.

Total Pos. blood Wassermann 857. Pos. Sp. Fl. 310 or 36.1 per cent.

The white female syphilitics form a comparatively small group, of whom many at the beginning were not punctured; and eliminating this group we have 737 positive blood Wassermanns and 299 positive spinal fluids, or more than 40 per cent.

Thus we feel safe in concluding that of our syphilitics at the Georgia State Sanitarium, between 36 per cent and 40 per cent show a neuro-syphilitic involvement of some type.

From the above figures it appears that the male syphilitic is two times more susceptible to a neural involvement than the female syphilitic also the colored syphilitic is just as liable to develop a neural involvement as the white syphilitic.

The writer has reached the stage at which he regards neuro-syphilis as really the serious phase of syphilis. I wish to em-

phasize the fact that you can have a neuro-syphilitic involvement with no neurological findings whatever. We did not think so a few years ago, but when we started to puncturing all the patients who showed a positive blood Wassermann, to our surprise, we found cases that showed absolutely no symptoms of a neural involvement that gave a positive spinal fluid finding. I have had in my own work recently two cases showing definitely parietic fluid finding with no neurological symptoms, one of which was left untreated temporarily and in two months began showing pupillary inequalities, tremors, etc.

We must always keep in mind the vascular type of neurosyphilis in which we have an involvement of the smaller vessels of the brain, and in which condition we may reasonably expect a negative spinal fluid finding. This condition usually occurs in our younger syphilitics, and in a shorter time after the initial infection, and is occasionally complicated by embolism. This type uncomplicated should yield readily to treatment.

When we formerly thought of neurosyphilis, the picture that came to our mind was the classical parietic or the developed tabetic. It is most essential that we make our diagnosis and start our treatment long before this period.

In making our diagnosis, a most careful neurological examination is necessary; especially sluggish, unequal, and irregular pupils; deep reflex changes, tremors, twitchings, etc. Speech disturbance, classical Romberg, etc., may come too late. More than a century ago, Esquirol wrote that speech defect among the insane is a fatal symptom. The laboratory findings are essential in every examination.

Every city and town of any size should have one or more physicians expert in the art of lumbar puncture. This most valuable test should be made from time to time on all syphilitics under treatment. It will save you the embarrassment of treating a patient for a while, getting a negative blood Wassermann, the symptoms clear up, the patient feels better; and in a year

* Read before the First District Medical Society, Savannah, Georgia.

or so develops cerebral syphilis or paresis. The lumbar puncture in reasonably skilled hands is a safe procedure. In sixteen hundred and eighty-two punctures at the Georgia State Sanitarium since January, 1918, we have not had a case showing any signs whatever of temporary or permanent damage that we have been able to detect. Routine lumbar puncture in all of our syphilitics will convince us that neural involvement is much more common than we suspect; and also impress us that the spinal fluid changes precede or antedate the neurological symptoms, vascular type excepted. It is in this early stage that we have the greatest hope of curing our patient. In the later stages all that we can expect from treatment is to arrest the process or disease, as we cannot repair the nerve damage already present. From my personal experience, and from the experience of certain medical friends, I feel that I am telling you the whole truth when I say that your success in curing neurosyphilis will be in direct proportion to early diagnosis and early treatment of the condition.

Another very important consideration of spinal fluid findings is that we are dealing with five distinct, definite and separate findings: Wassermann, butyric acid Ross-Jones, gold-sol., and cell count. These usually correlate themselves in such a way as to give us a fairly definite idea as to the particular type of neurosyphilis with which we are dealing. It has been our observation that the patient usually runs the clinical course indicated by the spinal fluid findings; in other words, when we get a paretic gold sol. we feel safe in predicting a paretic clinical course if not influenced by treatment. We have also observed that when treatment is pushed, and the paretic responds to treatment, there is a strong tendency for the gold sol. curve to change to a cerebral syphilitic curve, and if treatment is continued judiciously, the gold sol. reaction is likely to disappear, and the spinal fluid clear up entirely.

In our observations we have seen marked remissions in cases of clinical pa-

resis when not under treatment. We have also seen similar cases under careful treatment get worse from month to month, the disease showing little respect for the doctor and less respect for his medicine. Last winter I presented at my clinic two treated clinical paretics; about the same age, with about the same symptoms, and who had been under about the same treatment. One showed marked improvement physically and mentally with remaining strongly positive blood Wassermann and paretic fluid findings. The other showed a worse condition both physically and mentally, but under the treatment the blood and spinal fluid had become negative. The cause of such a paradox is difficult to explain. At this point a very important question arises: Is the clinical paretic always a real paretic with parenchymatous brain involvement?

The staff of the Georgia State Sanitarium is very much interested in syphilis among the insane; and most especially where there is a neural involvement. We have done much in the way of treatment, and some excellent results have been obtained; and we feel that every case deserves treatment, except when too far advanced. When in doubt treat.

We are of the opinion that a judicious combination of drugs will give the best results, changing the combination as common sense and experience indicates. Our experience has taught us not to depend on salvarsan alone, and in this connection I wish to quote from the work of Dr. John W. Oden, of our staff. He took forty colored males showing positive blood Wassermanns and signs of syphilis; but showing negative spinal fluids and no signs of neuro-syphilis. These were divided into two groups—twenty each. The first designated as the salvarsan group and the second as the salvarsan, iodide of potash and mercury group. These were treated for six months as follows: salvarsan group—salvarsan 0.6 gm. intravenously each week—twenty-five doses. The salvarsan, iodide of potash and mercury group received salvarsan 0.3 gm. intravenously and

salicylate of mercury gr. I, hypodermatically each week, and saturated solution of k. i. gtts. X. t. i. d. for twenty-five weeks.

At the end of the treatment, the arsenamine group showed eighteen negative and two positive blood Wassermanns; but six months after the treatment was finished fifteen out of the twenty showed positive blood Wassermanns. The salvarsan iodide of potash and mercury group all showed negative blood Wassermanns after the above treatment; and six months after the treatment each of the twenty still showed a negative blood Wassermann.

We are anxious to see similar experiments carried out on neurosyphilitics of different clinical types.

In conclusion I wish to urge that the general practitioner and the specialist in every line be on their guard continuously—looking for syphilis, and most especially searching for early neurosyphilitic involvement. It is you that see these patients in the early and most treatable stages. And above all things be persistent in your treatment—regardless of type. Treat to cure early syphilis, treat to prevent neural involvement, treat to cure early neural involvement, and treat to arrest the process in late neural involvement. By following this suggestion the writer feels that you will prevent many cases of insanity traceable to syphilis; and in so doing you will be performing a duty most patriotic.

Conclusions.

1. In 6 per cent or more of our resident population at the Georgia State Sanitarium the mental disease seems to be directly traceable to syphilis.

2. The male syphilitic is much more liable to neurosyphilitic involvement than the female syphilitic.

3. Our observations show that the colored syphilitic is just as liable to a neurosyphilitic involvement as the white syphilitic.

4. Syphilis of the nervous system is more prevalent than it was formerly thought to be.

5. The most treatable stage of neuro-

syphilis is certainly the earliest stages, and this early stage is determined definitely by lumbar puncture—vascular type excepted.

6. In treating late syphilis we can only hope to arrest the process. The damages already done cannot be repaired and this is most especially true of the nervous system.

7. Our observations at the Georgia State Sanitarium lead us to think that syphilis in all its forms, and most especially the late forms, is best treated by: judicious combination of salvarsan, iodine of potash and mercury.

ACCIDENTAL HEMORRHAGE, WITH REPORT OF FIVE CASES.*

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Accidental hemorrhage is generally understood to mean one which occurs from the separation of a normally situated placenta, in contradistinction to the unavoidable hemorrhage of placenta previa. It may be called an abortion at or near full term. It is the gravest complication met with in obstetrical practice. I know of no condition that will tax the skill, wit, nerve and brain of the obstetrician to the extent of this complication. We may come in contact with eclampsia, post-partem hemorrhage, placenta previa, contracted pelvis, persistent occipito presentation, inertia, breech presentation, and several other complications, but none of them, gentlemen, can be compared to accidental hemorrhage in both maternal and fetal mortality.

As to the frequency of this grave complication, no two authors are of the same opinion. Lobenstine and Harrar noted this complication forty-seven times in forty-two thousand cases in the lying-in hospital in New York. Holmes, of Chicago, claims that owing to lack of proper recording, too low an estimate has been given, and says that there is one case of accidental hemorrhage in every two hundred deliveries. DeLee is of the opinion that it occurs much less than one in five

* Read before the Richmond County Medical Society.

hundred cases. In fifteen thousand confinements in the Chicago Lying-in Hospital there were only twelve cases of complete placental detachment, but in addition thirty-one cases of partial detachment, the placenta showing a firm ante-partem clot, with the clinical course of labor having been distinctly pathologic. No doubt most of you gentlemen present who do a large or moderate amount of obstetrical work can recall having seen any number of cases where the placenta would show one or more old antepartem clots in the center of the placenta which would indicate a partial separation of the placenta before delivery. In upward of thirteen hundred confinements I have encountered five severe accidental hemorrhages, which in my mind would indicate that Holmes' statistics and records are about correct.

Varieties: There are two ways in which the hemorrhage may appear. It may appear frank or open, hidden or concealed, the frank being the more usual, and again the two forms may be present in the same case. In the point of the separation of the placenta in the frank it is usually at its lower part, and the blood then easily trickles down between the chorion and decidua and finds its way out through the vulva.

In the concealed variety, the blood is confined between the placenta and uterine wall, causing the placenta to bulge inward towards the uterine cavity, and the large blood clots will bulge in the opposite direction. This bulging can be felt through the abdominal wall. In one of my cases after the delivery of the dead fetus four large blood clots the size of the crown of an average hat followed the delivery of the dead fetus and placenta.

Etiology: This condition or complication almost always occurs in multipara and especially those who have borne several children. The predisposing causes are as follows: profound anemia, general ill health with profound debility, chronic pelvic congestion, endometritis, nephritis, syphilis, want of muscular tone, pendulous abdomen and various diseases of the decidua and placenta.

The exciting cause is traumatism, such as kick in abdomen, lifting heavy weights, sudden jar or high step, as from street car as was the exciting cause in one of my cases. Leaning with the abdomen against hard substance, falling down steps, stumbling over an object, etc., are causes.

Symptoms: In the frank variety the escape of blood is seen which at once points to the existing condition. There is generally pain which may be of a tearing, piercing character, or it may be cramp-like, colicky, or it may be of a bearing down or dull aching character. In the cases I have seen the pain was not characteristic. Pain may be localized at the placental region or lower uterine segment, due to stretching, from the large retained clots. There is no dripping of blood, as some of the authors would have you believe, but instead from what I have observed there is a continual and heavy flow of blood which is almost impossible to control by packing, drugs, or any other method.

In the concealed cases the symptoms are extreme collapse, exhaustion, shock, due to stretching of the uterus, which becomes of an enormous size. The pulse is small, compressible and rapid, extreme pallor, profuse cold perspiration, dyspnea, air hunger, yawning, extreme thirst, nausea, disturbance of sight and hearing, coma and death follow. In this variety there is sometimes a complete absence of labor pains.

Differential Diagnosis: This condition may be mistaken for rupture of the uterus.

Differential diagnosis, placenta previa:

Accidental Hemorrhage.

1. Onset sudden.
2. Pain in placental slight.
3. Hemorrhage either internally or externally.
4. Hemorrhage usually severe internally or externally.
5. You have one hemorrhage.
6. History of cause.
7. Symptoms of a severer hemorrhage than the amount of blood shows.
8. Dead fetus.

9. Hemorrhage will continue after rupture of membrane.

10. Severe hemorrhage during contraction with no let up.

Signs.

1. Abdomen tense, painful to touch, very much distended.
2. Uterus tense.
3. No fetus heart sound.
4. Can't feel placenta.
5. Bag of water tense, can feel fetal head.

Placenta Previa.

1. Onset is quiet.
2. No pain unless uterine.
3. Hemorrhage always at the start.
4. First hemorrhage is mild and external.
5. Several.
6. Usually no cause.
7. Symptoms in proportion to amount of hemorrhage.
8. Live fetus.
9. Hemorrhage stops in all but central type.
10. Hemorrhage increases by contraction but not constant.

Signs.

1. Abdomen as usual.
2. Uterus soft unless contracted.
3. Heart sounds nearly always present.
4. Placenta palpable in cervix always.
5. Bag loose, cannot feel fetal head engaged.

Rupture of Placenta.

1. Usually during pregnancy.
2. Uterus enlarged, tense and symmetric.
3. Uterus contracting.
4. Can feel fetus through os.
5. No tear palpable.

Rupture of Uterus.

1. Occurs during labor unless from external violence.
2. Uterus small at one side with fetus on other side.
3. No pain or contractions.
4. Cannot feel fetus through os.
5. May feel tear and sometimes can feel gut.

Prognosis: In one hundred and six

cases collected by Goodell there were fifty four maternal and one hundred fetal deaths. His were mostly concealed hemorrhage which accounts for the great mortality in the maternal deaths. This is the gravest complication that the obstetrician has to deal with and it is safe to say that one half of the mothers and ninety-five per cent of the babies, with a complete separation and concealed hemorrhage, will be lost.

In a series of upward of thirteen hundred deliveries I have encountered five accidental hemorrhages. Two of them were concealed and the others were open or frank. In the concealed cases both mother and baby died, while in the open or frank cases the mother survived and two of the babies died. In my opinion the prognosis depends upon circumstances. If the obstetrician is called at the onset and can recognize or diagnose the condition early, get his patient into the hospital immediately, have everything in readiness, a large percentage of the mothers can be saved.

Treatment: The best treatment is that which will empty the uterus the quickest, with the least danger to the mother. As the fetus is always dead little attention should be paid to it. The condition of the cervix is the best guide as to which method to pursue. If the cervix is partially dilated, and soft, the patient should be given ether or gas-oxygen, the dilatation completed manually, and delivery accomplished with forceps or by version. You should bear in mind the fact that following the delivery, there is always a severe postpartem hemorrhage in these cases, which if not controlled immediately will surely prove fatal to the mother. If the cervix is not sufficiently dilated and the patient's condition good, the bag of water should be punctured, a dilator inserted or gauze packing properly inserted and pituitrin given to induce pain. The patient should be watched very closely. If labor progresses in a satisfactory manner delivery can be accomplished in the manner just described. On the other hand should the cervix be tightly closed, and the hemorrhage still going on, the case be-

comes very serious and calls for other treatment. Consultation should be sought, and a vaginal or abdominal Caesarean operation should be done.

Case No. 1. Concealed Accidental Hemorrhage.

Mrs. H. White, age 38 years, the mother of four children, the oldest being seventeen, she weighs about 140 pounds, is anemic and had been suffering from leukorrhea for several years. She had always done her own house work. I had never seen this patient before, she having moved to this city the day before from a neighboring town. She told me that she had assisted in packing and lifting her household effects for two days and that she had arisen at four o'clock this particular morning and prepared breakfast for her husband, he being a conductor on the railroad, whose train left at 5 o'clock. She told her husband that she was not feeling well, that she had been suffering with cramp-like pains in the abdomen the greater part of the night, and she would prefer that he not go off. He paid little or no attention to her and went to his work. Shortly afterwards the pains in the abdomen grew very much worse and she felt very weak and faint. This condition kept up until seven o'clock at which time she noticed a severe hemorrhage and became very much weaker. She then sent for a relative who in turn sent for me. About nine o'clock I found her lying in a pool of blood and bleeding very freely. She was drowsy, extremely weak, with a weak rapid pulse, in fact she resembled a dead woman. I made a vaginal examination and found the os dilated to the size of half a dollar. She had no distinct labor pains, but the same cramp-like feeling that she had during the night. I must confess that I did not recognize the trouble, having never seen a case before. I administered a half dram of ergotole hypodermically and left immediately for the assistance of our lamented friend, Dr. Jos. E. Allen, but could not find him. I secured the assistance of another physician and we immediately made preparations to deliver

the woman under chloroform with forceps of a dead baby, the mother died fifteen minutes later.

I met Dr. Allen a few days later, told him of my troubles and that I had tried to secure his assistance. I further told him that I intended giving up obstetrical practice after such an experience. His reply was "don't feel that way about it, young man, I never had but three cases in all my experience and lost all three of them."

Case No. 2. Concealed.

I saw case No. 2 five years later. This was a small anemic woman, multipara, the mother of four living children. I had known this patient for four years and had treated her for leukorrhea and other troubles. I had delivered her of her last living child which was two years of age. Her only abnormal condition at the previous delivery was a persistent atony. I was called at her last delivery three hours after she was taken with the cramp-like pains and distension of the abdomen and other symptoms as in case No. 1. In making vaginal examination I found the os would barely admit two fingers. Realizing the situation I immediately summoned an assistant who anesthetized the patient with ether. I proceeded to do a manual dilatation and delivered with forceps, which I did in a very short space of time. Upon the delivery of the fetus I controlled the postpartem hemorrhage with gauze packing. This patient died two hours after the delivery, from shock and the loss of blood.

Case No. 3. Frank.

Mrs. S, age 23 years, multipara, weighs 115 pounds. This little woman I had delivered twice previous to this delivery. Her first delivery was a medium forceps delivery, which was necessitated by a persistent atony. Her second delivery was induced by pituitrin which had just come into use. Her third delivery was a breech presentation, with one foot delivered with the knee in the crevix, and the foot in the vulva. I reached this patient shortly after being called and found the above presentation with severe hemorrhage,

which of course was very much retarded by the presentation. I put the patient under a partial chloroform anesthesia, brought down the other foot and made the delivery in a very short space of time. Following the delivery there was a postpartem hemorrhage which was controlled by a gauze packing and ergotole hypodermatically. The fetus was dead, but the mother lived.

Cases Nos. 4 and 5. Open or Frank In the Same Patient.

This patient was the mother of six children. She was 35 years of age, had an anemic appearance, but weighed 150 pounds. I was called in consultation to see this patient in the year 1917. Upon reaching her bedside I found her in labor, with a very severe hemorrhage. I immediately sent her to the University Hospital without making an examination, but inserted a gauze packing. After reaching the hospital and getting everything in readiness for the delivery, I removed the gauze packing which was followed with a free hemorrhage. I found the cervix dilated larger than a dollar. The patient was anesthetized and delivery done with forceps. The postpartem hemorrhage was controlled with gauze packing. The fetus was dead and had the appearance of being premature. The mother made a rapid recovery. Six months after this delivery this patient became pregnant again. Her husband came to see me and was very much distressed over the fact. I told him that we would watch her very closely, that he must not let her do any heavy lifting or heavy housework, that she must wear an abdominal support after she was well advanced, which she did and through to full term with a normal delivery.

On September 8th, 1921, at 2 o'clock a. m., I was called to this patient by her husband who informed me that she would bleed to death before I got there if I did not hurry. Realizing the condition, I first phoned to the hospital and had the ambulance follow me. Upon reaching her I found her sitting on the edge of the bed with blood pouring from her into a com-

mode. I immediately packed her with gauze, placed her in the ambulance and sent her to the hospital. Upon reaching the hospital I had the nurse get everything in readiness for the delivery and had saline solution ready. The patient was placed under ether, the gauze packing removed, which was followed by hemorrhage. I found dilatation larger than a dollar. I ruptured the membrane, applied forceps and delivered her of a large dead fetus. After the delivery of the fetus and placenta, several large blood clots came which were followed by the most severe postpartem hemorrhage that I have ever seen, which was extremely hard to control. Twenty-four gauze strips were used, ergot and pituitrin was administered and every other means known was resorted to in order to control the hemorrhage. Had it not been that saline solution was administered during the delivery, coupled with the fact that the patient was in the hospital, I feel confident that this patient would have died, as it was her life hung on a thread so to speak, for several hours, and it was two months before she was able to leave her bed and the room.

REPORT OF A CASE OF SUDDEN DEATH IN LABOR DUE TO INTRA- CRANIAL HEMORRHAGE.*

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A. P., colored, age 32, Grady Hospital, No. 3320, was admitted to the maternity ward at 5:30 p. m., July 16, 1922. She was in active labor and had made such progress that there was not sufficient time to obtain a complete history or examination before delivery. It was noted, however, that she walked into the delivery room and appeared to be in a cheerful state of mind. There was no mental dullness evident. She stated that she had had three miscarriages and four full-term labors and had carried the present pregnancy

* Read before the Fulton County Medical Society.

to full term without any complications except occasional swelling of the ankles during the past several weeks. There had been no nausea, vomiting, visual symptoms or headache during the pregnancy. Labor pains began July 15, but had not been frequent or severe until several hours before admission to the hospital.

Examination showed a rather stout, obese patient, having moderately severe pains at two to three minute intervals. The heart, hastily examined, seemed to be normal; the lungs were not examined. The blood pressure was found to be 230 systolic and 165 diastolic. The enlargement of the abdomen corresponded to that of a full term pregnancy. The fetus was in the O. L. A. position, fetal heart normal, and the head deeply engaged. Rectal examination showed the head almost to the perineum, the cervix very thin and more than half dilated. There was no edema of the vulva, face or extremities.

Pains became more severe and at 5:55 p. m., the membranes ruptured spontaneously and at 6 p. m. there was bulging and beginning crowning of the head. No anesthetic was administered. At about 6:10 p. m., while the patient was straining and pushing the head over the perineum, she suddenly became rigid and remained so for almost a minute, during which time breathing became short, shallow, jerky and then ceased; the heart, at first, beat very rapidly, then gradually slowed to 35 per minute after respirations ceased, before stopping altogether. Death of the mother occurred before the baby was completely delivered, but it was extracted at once and showed no asphyxia. The baby was a healthy appearing, male child, weighing 7 3-4 pounds. The placenta was expressed and on examination, showed several large, white infarcts.

The suddenness of the death pointed to a cerebral, pulmonary, or cardiac localization of the etiological factor, such as intracranial hemorrhage, pulmonary embolism or acute dilation of the heart. It was also possible that the patient died from

rupture of an aneurism or from an acute toxemia or uremia of pregnancy. Rupture of the uterus, or shock would not have tended to produce such an acutely fatal outcome. Against the diagnosis of acute cardiac failure was the fact that the heart continued to beat at an increasingly slow rate after respiration ceased. The high blood pressure and death during a straining effort, strongly suggested intra-cranial hemorrhage, although the effect was unusually rapid.

A necropsy was performed and the following observations made: no evidence of injury to the tongue; small amount of clear straw colored ascitic fluid; gastrointestinal tract negative; pelvic organs normal; liver normal in size and of pale, yellowish color, and showed several small hemorrhagic areas on surface; spleen moderately enlarged, soft and congested; kidneys negative except for congestion; lungs negative except for slight edema and firm adhesions between diaphragm and base of left lung; heart firmly contracted, no enlargement evident, heart muscle of normal thickness but of a grayish appearance; patches of localized sclerosis on aortic and mitral valves, with slight deformity of valves; no aneurism present; brain showed diffuse infiltration of blood over both temporal regions, becoming more pronounced toward base where a massive hemorrhage was found covering the medulla pons and chiasm with large clots and fluid blood. No search was made to locate the ruptured vessel, as the specimen was to be prepared for the museum.

Microscopic examination of the tissues by Dr. John Funke showed chronic interstitial myocarditis, congestion of the liver, spleen and kidneys, and edema of the lungs.

The correlation of the clinical and necropsy observations would therefore indicate that under the influence of high blood pressure, and straining effort, and favored by a possibly diseased vascular structure, there occurred a rupture of a large vessel at the base of the brain with sudden pro-

fuse hemorrhage, the first effect of which was probably to paralyze respiration, being rapidly followed by increasing pressure on the vagus center, causing a progressive slowing and final arrest of the heart beat.

20 Ponce de Leon Ave.

RATIONAL SURGERY IN GALL BLADDER DISEASE.

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Unfortunately the medical profession is no exception when it comes to following fads, and it has not failed to do so in connection with gall bladder disease. Much has been said and written regarding cholecystectomy versus cholecystotomy and vice versa, but as was so well expressed by the distinguished Dr. Graham: "Increased efficiency of gall bladder surgery lies not in a stereotyped operation, but in a more accurate knowledge of surgical pathology, and the recognition of the whole pathological condition presented and suitably dealing with it."

For the study of any surgical problem, and surely gall bladder surgery is one, a comprehensive knowledge of the underlying principles, based on a working conception of the anatomical field, plus a comprehensive knowledge of the histopathology, is demanded. Assuming that the general anatomical landmarks of the biliary system are familiar to all of us, a study of the histopathology only, with a special reference to the lymphatics and blood supply, will be attempted. The gall bladder, *per se*, is composed of three walls: (1) a serous coat, (2) a fibro-muscular coat with its lymphatics, and (3) the inner or epithelial coat, composed of columnar epithelium. The lymphatics connect freely with the intralobular spaces of the liver and extend downward to include the common duct and even freely communicate with the lymph spaces of the pancreas. We are warranted in this conception of the biliary lym-

phatic system by the experimental work of Mueller done as early as 1912, which was corroborated by Graham and Peterman in their animal experimentations published in July of last year. Its blood supply is principally from the cystic artery a branch of the hepatic, with an occasional anastomosing branch from the liver. Its venous mechanism being a part of the portal system.

We assume, and there is sufficient worthy evidence to bear out the assumption, that the gall bladder is not purely a vestigial organ, but is one with two or more fairly well established functions, namely: a storage house for concentrated bile having muscular action sufficient to cause spasmodic contractions, with fractional deposits of bile into the small intestines as it is needed; and a safety valve to relieve pressure on the common and hepatic ducts.

The most accepted conception of the pathogenesis of the gall bladder and biliary system is based on five possibilities: (1) a descending infection from the liver by bacteria carried down in the bile, (2) an ascending infection from the duodenum by way of the lumen of the common duct, (3) a hematogenous infection of the gall bladder and ducts, (4) an infection of the gall bladder from contiguous inflammatory organs, and (5) what appears to be the most rational conception, an infection by way of the lymphatics.

The work so carefully and thoroughly elucidated in the elaborate animal experimentations by Cushing, Ralleston, Kock and Roneau and later supported by clinical investigations by the late Sir William Osler, justifies us in eliminating the first possibility as a mode of infection, except in very rare instances of cholecystitis. It was clearly shown by these workers that the mere presence of bacteria, either typhoid or otherwise in the bile, did not produce symptoms suggestive of cholecystitis. It is only in the presence of mechanical irritation, such as caused by stones, that we are able to produce cholecystitis from infected bile. Osler pointed out that in a careful study of 15,000 cases of typhoid fe-

ver there was only something like 57 cases of cholecystitis. Bearing in mind that the urinary bladder is repeatedly infected with typhoid organisms without symptoms of cystitis, is it not fair to assume that the same infection could take place in the gall bladder without giving rise to symptoms of inflammatory lesions, provided the cystic duct remains patulous?

Of the five possibilities only the last three take into consideration the actual infection of the deep layers of the gall bladder wall. While the blood stream is unquestionably responsible for a certain number of infections of the gall bladder wall, the accepted idea is that the infection more frequently takes place by the hepatolymphatic route. As was so carefully worked out by Suden, Mueller and Deaver, and later confirmed by Graham and Peterman in their animal experimentations, working with prussian blue, the infection is primarily supplied to the liver through the portal system, originating from one of its tributaries, most often the appendiceal vein. In no other way are we able to explain the so frequent association of appendiceal inflammation and the various gall bladder lesions.

Now, assuming that the infection is primarily in the lymphatics, or of hematogenous origin, being deposited either in the wall of the gall bladder or the lymphatics of the liver, to later involve the gall bladder wall, is it not fair to assume that to successfully combat it certain fundamental principles of surgery must be adhered to, and practically applied, viz: (1) thorough eradication of the source of infection, be it tonsils, teeth, appendix, stagnated colon, or what not, (2) an adequate and complete destruction of the lesion per se, (3) restoration to normal function, as nearly as possible. How are these best accomplished in a given case of cholecystitis? (1) Through pre-operative preparation of the patient. (And this point is well taken, because there is no surgical condition that should be more carefully approached, or no type of case which should be more thoroughly prepared than the patient ap-

proaching an operation for cholecystitis.) (2) Thorough relaxation with adequate exposure. (When we stop to consider the many side issues and various remote complications which may be a part of a gall bladder lesion, the necessity of an exposure adequate of for complete investigation of the contents of these abdomens is clearly appreciated.) (3) A careful, systematic, painstaking exploration of the abdominal cavity, in which every effort is made to explain the patient's symptoms before we suspect the gall bladder as the cause. I am sometimes prone to believe that some of us are worthy of the Goodell's criticism, made applicable here, "As the angels, according to the middle-age school men, fly from point to point without traversing the intervening distance, so with like swiftness the physician of the present day jumps from any distinct discomfort of the upper abdomen to an infected gall bladder." (4) Adequate management of the gall bladder infection per se, based on a given pathology in the given case. (5) A careful anatomical and physiological closure of the abdomen using every possible precaution against post-operative adhesions.

Assuming from a clinical point of view, that there are three types of gall bladder disease, namely: (1) the mechanical gall bladder, if you please, in which we invariably find a free bladder in which there is one or more stones with sterile bile characterized by repeated attacks of pain, followed by an interval in which no symptoms are manifested. In this case the gall bladder is producing symptoms merely from mechanical irritation caused by a temporary blockage of the cystic duct; (2) the mild type of cholecystitis of variable grades, with or without stones, characterized by irritating symptoms producing the various reflex manifestations without symptoms of sepsis or evidence of local infection. In this type there is often a transient blockage due to the inflammatory reaction but without a permanent destruction or narrowing of the duct; (3) The highly infected gall

bladder with evidence of absorption, plus local manifestations or peritoneal irritation of the upper right abdomen. In this type we expect to see a thickened gall bladder wall with evidence of a peri-cystic inflammation with adhesions, accompanied by a complete blockage of the cystic duct.

For the first condition some type of operation, based on an effort to relieve the gall bladder of the mechanical irritation, namely, stones and, at the same time, to leave it as nearly normal as possible, is the ideal. This can be accomplished in one or two ways: (1) the standard cholecystomy with drainage, (2) the more classical operation of cholecystotomy with closure. The second operation, however, is only indicated in carefully selected cases in which the cystic duct remains patulous and in cases where we can reasonably expect an early establishment of cystic duct drainage leaving the gall bladder to function as nearly normal as possible.

In the management of the second type, or the so-called fibrinous gall bladder, one or two things may be done. (1) If in a given case it is felt that, by the removal of the source of infection plus a temporary drainage of the biliary passages, the gall bladder might rid itself of infection and the lumen of the cystic duct be re-established, a cholecystotomy with drainage seems rational. (2) If in a given case it is felt that even though the requirements as outlined above are met, the function of the gall bladder would not be re-established a classical cholecystectomy with drainage through the cystic duct is indicated. While it might be a safe procedure to omit drainage in a certain selected type of case, evidence goes to show that this procedure is not without grave possibilities. As Erdman suggested, "When we recall that at all times pressure within the common duct amounts to as much as 150 to 300 mm of mercury, we question the feasibility of closing these abdomens without at least a 48 hour safety drain."

In case of the third type, one or two procedures seem rational (1) Simple drainage in cases of poor risk, in which we think the

patient's condition does not warrant cholecystectomy even though cholecystectomy must be done later, and in certain severe inflammatory conditions in which we feel that any unnecessary manipulation is unwarranted. "Two operations and a living patient is preferable to one operation and a funeral." (2) A classical cholecystectomy with or without drainage through the cystic duct into the duodenum, as described by Willis.

If the pathology of cholecystitis is in the wall of the gall bladder, and if we believe it is either primarily or secondarily a part of an infection involving the liver, common duct, and, as is true in a large percentage of cases, the pancreas; it would appear that for permanent relief an effort should be made to establish a more or less permanent drainage. As shown by the very extensive work done by Judd, this appears to be best accomplished by removing the gall bladder when there immediately follows a dilatation of the common along with the hepatic ducts. This constant, increased pressure results in an incompetency of the muscle of Oddi, with a resulting constant flow of the bile into the duodenum.

It might be suggested that this could best be accomplished by one of the various procedures of anastomosis of the gall bladder, to a proximal hollow viscus, namely, the stomach or duodenum, but it has been shown that this procedure is not without grave mechanical difficulties and remote complications. While I have had no experience with this operation, except in cases of blockage of the common duct due to malignancy, this procedure is being advocated by some and with an improved technique may prove to be the method by which our imperfect management of some of these cases may be obviated.

To repeat, "Increased efficiency of gall bladder surgery lies not in a stereotyped operation, but in a more accurate knowledge of surgical pathology, and the recognition of the whole pathological condition presented, and suitable dealing with it."

THE JOURNAL

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department**The Savannah Meeting.**

The next annual meeting of the Association will be held in Savannah, May 2nd, 3rd and 4th. The official headquarters, meeting hall and exhibitors' hall will be at the DeSoto Hotel. Savannah, the oldest and most historic city in the state is noted both far and near for its wonderful hospitality and a meeting in Savannah means one long to be remembered. At present the outlook is for the largest and best meeting in the long and eventful history of the Association.

On the day preceeding the opening session there will be a meeting of the Secretaries' Association which is composed of the secretaries of all county and district societies. All secretaries will be expected to attend and each will be called on for a five-minute talk on organization and other matters for the good of the Association and the profession. Following this the president, Dr. J. M. Smith, of Valdosta, will deliver an address to the secretaries.

The Georgia Medical Society, (Chatham County Society) of Savannah, has ap-

pointed the following committee on arrangements for the meeting: Dr. W. R. Dancy, Chairman; Dr. W. H. Myers, Dr. Chas. Usher, Dr. Ralston Lattimore; the president, Dr. H. W. Hesse and the secretary, Dr. F. Carson Demmond.

Chiropractic Bill Killed in South Carolina.

After a long and stormy debate the chiropractic bill was finally killed in the South Carolina House of Representatives. The final vote was 65 to 46 against the bill. It is stated that the action of the House was considered a hard blow for chiropractic. This recalls our fight in Georgia in 1920 and 1921 and impresses the fact that had we been more alert, steadfast and aggressive we might have written a different chapter in our history. Dissension and willingness to compromise and trade by some on whom we had placed our chief reliance was the cause of the blot on our noble state. What South Carolina has done Georgia might have done.

Federal Department of Health, Education and Welfare.

In Washington during the war, the best business executives of the country brought the defects of the national administrative system to a public knowledge that had never before existed. Since that time, trained minds have been concentrating on such a reorganization of the federal departments as would enable them to function both more effectually and, what is quite as important, more economically, so that taxes may be reduced. Suggestions along these lines effect practically every department of the government, but we will only consider those which would make changes in federal administration as it effects the public health and allied problems.

In order to do what should be done by the government, it is really a pity that we have to consider what has already been done. Most of the federal efforts along public health and educational lines have been haphazard—the result of some movement or craze, and such things must result in lopsided efforts, putting undue em-

phasis on first this and then that subordinate movement, instead of calmly surveying the entire field, visualizing its needs, and then fitting the machinery of government to their solution.

At the conference recently held in Washington, the Postmaster General, Dr. Hubert Work, recently president of the American Medical Association, and himself one of the most distinguished and successful practitioners of medicine of the country, made a brief statement that was full of real force. He said it must be recognized that most of the problems affecting both public health and education were matters which could only be solved under the police powers reserved to the states; that it would require a large and complicated department to head up these interests in the federal government so that the whole national education and health movement could be coordinated. From Washington there would be control of maritime quarantine to prevent the introduction into the United States of epidemic diseases from without. The other great problem under federal control is interstate quarantine to prevent the spread of disease from state to state along the lines of travel, which are now so important. Besides these, the federal government should, in its laboratories, conduct and encourage investigation in all those things which effect public and private health, especially in the larger problems that are now the causes of ill health in large sections of the country, or amongst considerable proportions of the population. They should have a few expert mobile units that may be called into consultation by affected states. Through conferences of state and local officials having a common problem they could help to focus attention with a view to its solution. Upon the invitation of states they could conduct demonstrations of methods for the prevention of diseases, especially emphasizing that it was not the function of the federal government to interfere with the treatment of diseases which already exist, that it had nothing to do with the regulation of the practice

of the healing art in any of its branches, and never should have.

General Sawyer, the personal representative of the President, stated that it was the present purpose of the committee on reorganization of the federal departments, to recommend to the Congress the establishment of a Department of Education, Health and Welfare, with a secretary in the cabinet, and an assistant secretary which would consist of four bureaus—education, health, welfare, and the veterans' bureau. The problems presented by these four bureaus are naturally inseparable, and the heads of such departments would be a national board of strategy which would help do things the country needs. It is proposed to transfer to the new department all the existing activities of the federal government along these several lines just as they are, taking over their personnel and functions, headed up by their technical staffs and chiefs, merely taking them from their present environments, which are frequently and entirely inimicable to their successful operation, and putting them where they can work sympathetically together. It is interesting that this same thing has been done by all the great governments in the world, and it is felt that the United States has lagged along behind the other States in recognizing the importance of its greatest asset—its human beings.

It is inconceivable that there can be any great objection to this program except upon the part of those who are the enemies of progress in government. It is not the purpose of the new department to enlarge the federal functions, not to interfere with the full and free exercise of the policy powers of the states in these respects. It is not the desire to build up a great federal organization, but rather to simplify and concentrate federal bureaus with a view to getting rid of the chaos and duplication that now exist in Washington. The proposed reorganization would decrease the expenses and increase the efficiency of every bureau involved.

It is especially recognized that the United States Public Health Service should

be transferred to the new department as it exists, carrying with it its honorable traditions.

At the invitation of General Sawyer, representatives of the medical and health professions from all sections of the country gathered together in Washington in January and it was interesting to see how unanimously and how gratefully they all received this great practical plan for progress in the efficiency of our federal government. It was realized by all those present that the records of the draft had shown that a great percentage of our young manhood and womanhood were growing up into adult life untaught as to the most important problems that would confront them as citizens, unprotected from the most serious defects that could impair their usefulness, and it was the unanimous desire of those present, as we all felt it would be practically the unanimous desire of the whole citizenship of the country, that this movement be carried through to successful conclusion.

To this end we invite our readers to bring these matters to the attention of the various State Medical organizations of which they are members, and especially to the public press, which in this country so largely molds public opinion, with a view to bring the attention of the members of the Senate and House of Representatives of the United States the feeling on the part of the public that this great and entirely nonpartisan movement which has the approval of the present administration, as it has had of the last three, should be put upon the statute books at the earliest possible moment.—A. T. McCormack, M. D., Kentucky Medical Journal.

Tonsil and Adenoid Clinics.

The following correspondence contains some meritorious suggestions to county societies, which deserve emulation. Special attention is called to the co-operation between the Bulloch County Medical Society and the civic bodies and that the members of the Society intend to include all surgical and medical cases which are

strictly charitable, and that the civic bodies have agreed to bear the necessary expenses.

Dr. Theo. Toepel, Chairman,
Committee On Health and Public Health
Education, Atlanta, Ga.

Dear Doctor Toepel:

The Bulloch County Medical Society organized at our last meeting by appointing a physician as a committee of one in each section of the county and requested him to solicit the aid of the heads of every civic organization in his community to secure charitable cases of all kinds, but most especially adenoid and tonsil cases and to make arrangements to have these patients in Statesboro on February 7, 1923, for the removal of adenoids and tonsils or any other condition which would require surgical or medical attention.

We considered at this meeting that it was essential in cases of operations for adenoids and tonsils that the patient have operations performed in hospital and have some few attentions afterwards on account of possible post-operative hemorrhage. Fortunately, for us, we feel that for the number of cases we will have in our county, there will be adequate compensation by the civic bodies of our county for the small expenses incurred in hospital.

With best wishes, I am,

Faternally yours,

F. F. FLOYD, M. D.,
Secretary Bulloch County Medical Society.

Letter to Committees.

Dear Doctor:

The Bulloch County Medical Society, at its last meeting, appointed you as a committee of one in your community to make special effort to find charity cases who need tonsils and adenoids removed or any other disease or surgical condition that needs aid and have them be present at our next society meeting.

The Society has organized a county clinic to look after these cases, which are strictly charitable and appointed for our

next meeting, Dr. A. J. Mooney and Dr. J. H. Whiteside to conduct this clinic.

We suggest that you confer with the heads of the different civic bodies in your community and ask them to aid you in finding these charity cases. Also we are sure that these civic bodies will be found anxious to furnish small funds where necessary to pay actual expenses in these cases, such as operating room fee, ether, etc., but strictly no fee to be paid surgeon in these cases.

At each meeting there will be appointed by the Society a new set, as conductors of this clinic.

Communications.

To The Editor:

Keen observers of our national life have commented time and time again on the intense pride of the average American in his own state and his own city.

Some have gone so far as to say that we carry it to the point of a sectionalism that hinders the development of the country as a whole.

Certainly many of us are so interested in the place where we live and work that we are in danger of forgetting that there is anything at all beyond its limits.

It has been said—and perhaps with good reason—that this is more true of New Yorkers than of men in any other city.

At any rate, the Bank of Manhattan Company believes that the more New York knows and appreciates what is going on in other parts of the country, the better it will be for all of us.

The enclosed advertisement is one of a series we are publishing in the leading newspapers of New York City with this idea in mind.

We thought you would be interested in what we had to say about Georgia.

Very truly yours,

HARRY T. HALL,

Vice President.

"The Peach Orchard State."

"Say 'Georgia' and you conjure up visions of acre after acre of peach trees in

blossom. At picking time these trees yield nearly five million bushels of fruit. But Georgia has other products. Over a million and a half bales of cotton—nearly four million bushels of peanuts—in all a half billion dollars in farm products annually. And her manufacturers have made great strides—reaching \$693,237,000 in 1919.

Georgia typifies the New South—scientific cultivation, diversification of crops—factories to take her own raw materials. In her growth her banks have done their part. It has been the privilege of the Bank of the Manhattan Company to work with them to serve her farms and factories.

Banking methods are more or less standardized. But banking manner is not and never will be. At the Bank of the Manhattan Company, methods are as contemporary as today's newspaper. But the manner, we pride ourselves, is distinctive. The outgrowth of 124 years' attention to making the transactions of commercial banking not only more profitable to our customers but more pleasant as well.

The result is a tangible development which may prove of value to your business as it has to many others. Your inquiry is cordially invited. Bank of the Manhattan Company, 40 Wall St., New York.

Thirteenth Annual Report of the Atlanta Anti-Tuberculosis Association for 1922.

President's Report.

To all Friends of the Atlanta Anti-Tuberculosis Association:

As a public health agency, the Atlanta Anti-Tuberculosis Association finds its work steadily growing. Since 1918 the medical work has doubled and the Educational Department, that is working with both white and colored, has been added.

Comparing the figures of 1918 with those of 1922, we find that last year the Association's work had increased more than 100 per cent during that time and the work was done on 80 per cent increase of budget.

Growing intelligence, better social fed-

eration and Atlanta's rapidly increasing population, are all responsible for this ever increasing demand.

The reports show the steadily increasing demand that is being made for health. Through the cooperation of the Atlanta public, it has been made possible in 1922 to continue the work without seriously damaging the program as planned in the beginning of the year.

With gratitude for the confidence and support of the public, the services of the physicians and the cooperation of the many loyal friends, the report for 1922 is respectfully submitted:

HUGH M. WILLET, President.

Medical Report.

During 1922 the Association has found its work steadily increasing—probably due to the fact that social agencies and individuals are learning the value of its service.

I. Numbers served:

Adults under treatment Jan.	
1st, 1922.....	827
Children under treatment	
Jan. 1st, 1922.....	276
<hr/>	
Total patients brought forward	1103
Adults admitted 1922....	848
Children admitted 1922....	331
<hr/>	
Total patients admitted 1922	1179
<hr/>	
Grand total treated.....	2282

Of this number 33 per cent were colored; 26 per cent were children.

II. Types of Service:

1. If an active case of tuberculosis is discovered in a family, other members are examined in order to discover the trouble in the incipient stage.

2. When cases come to us, a preliminary examination is made and the nurse visits the home in order to make a social study and if it is possible for the people to pay for private service they are trans-

ferred from this clinic to the physician of their choice—these numbered 51.

3. The Medical Staff has consisted of 20 active physicians and 8 consultants. Daily clinics have been held numbering 1,193, giving 5,777 treatments. Periodical staff meetings are held.

4. The 7 visiting nurses, 5 white and 2 colored, have made 9,250 visits in the homes and have assisted the physicians in the above mentioned clinics.

5. The scientific work of this Association could not have been done without the assistance of the state, city and private laboratories who gave service in 1,766 instances.

6. The Atlanta Dental Society has supplied a dental department to be used by the Association, and 556 patients have been treated.

7. Disposal of patients:

(a) 8 adults have been declared arrested cases; some have been under treatment as long as three years.

(b) 170 were declared negative, and relieved of the fear they had of tuberculosis.

(c) 44 of these people were found to be far advanced; they have been made comfortable at home or placed in a sanatorium, and other members of the family examined and instructed.

(d) 131 people were diagnosed moderately advanced and are receiving expert clinical care. Many of them are steadily improving and some have been able to again resume their work.

(e) 35 incipient cases are in the hopeful stage and they will be given every opportunity to get well.

(f) The remainder of the 2,282 were placed under observation, pending diagnosis or transferred to other clinics.

(g) Batle Hill Sanatorium has rendered invaluable service and cared for 134 patients. 25 per cent of these have been children. 49 per cent of these were colored.

Respectfully submitted:

C. C. AVEN,

Chief of Medical Staff.

Atlanta Neurological Society.

At the regular meeting of the Atlanta Neurological Society held in November Dr. E. Bates Block presented three very interesting cases, which were as follows:

Case I. A case of spasmodic coughing.

Mr. V., aged 34 years was seen on November 6, 1922, complaining of nervousness and coughing spells.

Family history unimportant except first cousins on father's side have tuberculosis.

Past history—Patient was kicked in the stomach by a mule fifteen years ago—otherwise unimportant.

Present illness—His cough began soon after the mule kicked him and has had it ever since, but is worse lately. He has one or two paroxysms a day lasting from fifteen minutes to two hours and ceases only when morphine is given to stop it. The cough comes on spontaneously or whenever pressure is made on the pit of the stomach. There is no sputum, it is dry and barking in character, and is between a cough and a hiccough. There have been some night sweats, and a loss of twenty-five pounds in weight in the last three months. There is no dyspnea except when coughing. The attacks start with a sore irritated feeling in the pit of the stomach and in 30 to 60 minutes the cough begins. The patient is always very nervous and restless. Examination of the lungs shows slight dullness at the right apex but no rales are heard. There is slight tenderness of the appendix. Weight, 128 pounds. Height, 5 feet, 9 inches. Normal 160.

Blood examination—Hb. 80 per cent. R. B. C. 4,016,000. L. 7,000.

Wassermann—negative. Urine—Negative. Blood pressure—systolic 106—diastolic 64. Heart examination negative.

Temperature 99—Pulse 18 to 1-4 minute. Respiration 25 per minute.

X-Ray Examination—There is a fine peribronchial infiltration extending from each hilus into upper lobes and apex. The hylus glands are heavy. There are some fine adhesions along the right and left domes of the diaphragm.

This case seems to be one of phrenic nerve irritation from diaphragmatic adhesions.

Case II. A case of bilateral ulnar nerve paralysis.

Mr. S., aged 47, was seen November 1, 1922, complaining of drawing and weakness of ring and little fingers on the right and left hands, worse on the left hand.

Family history unimportant.

Past History—Malaria on and off since 1899. Jaundice in 1898. Stomach trouble since 1899. Riggs Disease for 7 or 8 years, and has lost most of his jaw teeth. Influenza in 1918, and unable to work for six months.

Present Illness—Trouble with left little finger began last December. Awaked in A. M. and thought he had slept on finger—felt numb—tingling. This continued and one or two months later half of ring finger became affected—outer side. About 6 weeks ago noticed trouble with little finger on right hand. About two years ago had injections in left arm for malaria-intramuscular—one place became infected and lanced—had trouble with it for 6 or 8 months. Left hand all right until 6 weeks ago when it became numb and began to get weak. Left hand affected since last December—gradually getting weaker. Slight hypertension of metacarpo-phalangeal joints left little and ring fingers with flexure of first interphalangeal joints. Atrophy of interossei and lumbricales—and thenar and hypothenar eminences. Especially marked atrophy of adductor pollicis. Sensation left hand defective to touch over inner side palm—little finger on palm and inner side ring finger. Left grip 57—right grip 97. Can't approximate little and ring fingers. Right hand no sensory defect and no atrophy. Reflexes both triceps present—both biceps ulnar and radials absent. Left hand and forearm normal to heat and cold except outer border of little finger and hand sluggish to cold. Right hand and arm normal to heat and cold. Back—all spinal segments normal to temperature and to pain and touch. Chest and abdomen—normal to temperature and to pain and touch. Legs normal to tempera-

ture and to pain and touch. No Babinski.

X-Ray examination—Cervical spine—No evidence of cervical rib. Hand-negative. No evidence of bone pathology.

Blood pressure—110-78. Blood examination—Hb. 70 per cent. R. B. C. 4,136,000. Leu. 5,000. Wassermann negative.

Urine—White-clear-1005—slightly acid. Alb. neg.-sugar neg.-ind. neg.-few pus cells—Occas. motile protozoa.

DISCUSSION: As belated information the patient states that prior to each ulnar nerve paralysis he played poker without ceasing for 24 hours with his elbow on the table and that the paralysis followed the prolonged pressure. The lack of segmental character and absence of dissociation of sensation seems to exclude syringomyelia.

Case III. A case of tabes dorsalis with attacks of aphasia.

Mr. T., age 61, was seen on November 20, 1922, complaining of trouble in walking and talking.

Family history was unimportant except that his wife had one miscarriage and his grandfather died of apoplexy.

Past History—Was a delicate child. Right inguinal hernia. Influenza in 1906. Three abscessed teeth removed in 1919. No history of venereal diseases. Otherwise negative.

Present Illness—Was sitting at table when trouble first came on—December, 1911. Fork fell from right hand—muscles of right side face contracted—relaxed in about 48 hours. After this noticed trouble walking—Weak for about 10 days. In August, 1920, had another light attack—came on during night. Was found in A. M. in bed with inability to speak clearly. Stayed in bed for one day and felt as well as usual. About 6 weeks ago had third attack—while dressing in A. M. complained of pain across forehead—acute—then pain around waist line. Pain lasted for 4 days—Much trouble getting bowels to move. Speech also affected with this attack. Condition has grown worse since this last attack. In 1918 and 1919, was at Mayo Clinic for 6 weeks—Had examina-

tion spinal fluid while there and then had one injection a week alternating from one hip to other. Says spinal fluid was reported negative but they treated him for locomotor ataxia. Constipation nearly all his life. Nocturia one to four times. Has to take enema 2 or 3 times a week for last 5 weeks and laxative E. N. Picks at ears, left mostly and gets out wax which he says has bad odor. Buzzing in left ear. Never any shooting pains. Since last attack 6 weeks ago knows what he wants to say but cannot say it—recognizes his mistakes but cannot right it. Print runs together, he says and can't read—does not understand what he reads. Does not understand spoken language. Aphasia tests calls only one out of 30 objects. Shaves himself every day since second attack. Always looks cheerful—slight smile. On testing sole reflexes is ticklish and flexes knees—not ankles or toes. Difficulty in walking came on suddenly with first attack but has become gradually worse ever since then. Emotional State: Optimistic—usually cheerful but indifferent to everything for the past 6 weeks—since last attack.

Psychomotor: Has never been unconscious—no convulsions.

Headache: Only one at start of last attack.

Sleeps well. Dreams rarely. Mental state—slow. No illusions, hallucinations, delusions or phobias.

Memory—Not good for last 6 weeks.

Cranial nerves: Smell right and left. Sight 15/15.

3-4-6- Pupils equal—no reaction to light—accom. normal—No nystagmus—Muscles good.

5 Motor good.

7—Normal.

8—Hearing 4 inches both ears. Hears ordinary voice.

9—No nausea. No dysphagia. Palate moves on phonation.

10—No vomiting. Pulse 21 to 1-4 minutes.

11 & 12—Normal.

Taste—Right and left ant. and right and

left post. normal—to acid—sweet-bitter and salt.

Speech—No synarthria—no dyspraxia—Aphasia-auditory, visual and inability to write or copy.

Muscle strength poor.

Paralysis—none. Posture—feet far apart and uses cane.

Tonus—hypotonus. Co-ordination—Gait very ataxia.

Rhombberg—Falling. Diadochokinesia good but slow.

Finger nose test good. Finger finger test good. Heel knee fair. Makes figures with feet good. Buttoning good.

Reflexes: Deep—right and left biceps, triceps, radial, ulnar, patella and achilles absent. Superficial reflexes: gag both right and left present—right and left upper abd. exag. Lower abd. cremaster-plantar and Babinski both right and left absent.

Sensation—Touch present.

Muscle Sense—Seems present in arms and knees but not feet.

Baris Sense—R. 3-6-9-15-12-18. L. 3-9-6-12-15-18.

Pain—Never any shooting pains. No pain except in intestines for a few days after last attack started and relieved by massage.

Stereognosis—Good.

Nutrition—Weight, 108; height, 5 feet, 5 1-2 in; normal, 151; never over 131 wife says. Vesical functions good control. Rectal functions good control. Temp. 96.9.

Mouth—Bad breath; no ulcer, no herpes. Tongue slightly coated.

Teeth—Two removed in 1919, balance look good. Tonsils, negative; thyroid, negative. Many moles, never jaundiced.

Lungs—Negative. No cough nor sputum. Night sweats in winter 1904. No blood, no pain in chest. No dyspnoea. Respiration, 18.

Heart—Negative. Pulse 21 to 1-4 minute. Blood vessels normal. Blood pressure 104-80. Abdomen, distended in lower part. Hernia—left inguinal. Liver neg. Spleen neg. Right kidney palpable.

Stomach—appetite good. There is no

pain, belching, tasting of food, nausea or vomiting. No heart burn. Intestines—occasional flatulence. Constipation nearly all of his life. Mucus in stools during last attack. No diarrhoea, blood nor piles. Urinary tract—no dysuria, haematuris nor stones. Diuria 3 or 4 times.

Nocturia 1-2 times every night.

Bones and joints—hyperextension of knees.

Blood—Hb. 80 per cent., RBC- 3712000- L. 5000. Malarial parasites neg. Wassermann negative.

Spinal fluid in 1911, 1918, 1919 all negative.

Urine—Amber, opaque, 1011, acid 12.5 to 25 c.c. Alb. trace, Sugar neg.-ind. 3- Scope- Pus cells in excess- many bacteria.

Stomach analysis- Amt. 3 oz.- sediment 1-2- Mucus neg. Free Hcl. 3.5 to 10- Total acidity 6 to 10- Lactic acid neg.- occult blood negative.

DISCUSSION: The case is of interest on account of the association of cerebral attacks with evidences of tabes dorsalis, marked anaemia, and negative blood and spinal fluid Wassermann tests.

DISCUSSION:

Dr. Gaines:

These interesting cases are open for discussion.

Dr. Dowman:

In regard to Case I, my mind is a blank as to what might cause the condition.

Case II. In regard to this second case, this man evidently has a complete ulnar paralysis on the left side, and a partial paralysis on the right side. In my own mind I cannot see anything but a lower motor neuron paralysis in this case. It is hard for me to be convinced that he could have a segmental lesion without definite segmental changes, which he has not. As to the etiology of a case like this, two possibilities suggest themselves: First, neuritis, and second, injury through pressure. The fact that this came on after the patient had been playing cards for 24 hours, during which time he had his elbows on the card table, suggests a direct pressure on the ulnar nerves as a cause of the paralysis. The case shows an atrophy of the adductor pollicis, causing a "sinking in" between the thumb and index finger, a feature I am glad was brought out, because during the past summer a young woman came to me with an ulnar nerve injury, who had a similar atrophy. She had seen a great many men in the north who could not see how a pure ulnar nerve lesion could cause an atrophy at this particular area. A beautiful illustration showing how the ulnar nerve supplies the muscles appears in Spalteholz's Anatomical Atlas.

Case III. This case must have a multiplicity of lesions. The aphasia, particularly the word and object blindness, the partial but not complete auditory aphasia, and a certain amount of motor aphasia is very suggestive of a lesion of the inferior part of the left parietal lobe. Bianchi in his book, "Mechanism of the Brain, Etc.," in his discussion of the inferior parietal lobe, gives some very beautiful cases with similar findings. In addition, this patient has symptoms which must be due to a degeneration of the posterior columns of the spinal cord.

Dr. Roberts:

Case I. It is a question as to whether this case is purely neurological excepting in that all reflexes are neurological manifestations. This individual has paroxysms of non-productive coughing, which results in exhaustion. These paroxysms may be started by pressing on the epigastrium. It may be caused by a vagus reflex or possibly a phrenic or diaphragmatic reflex. In such a case I would be particularly

suspicious of a mediastinal growth. Furthermore, one should raise the question as to a possible old apex tuberculosis with adhesive involvement of the vagus, a diaphragmatic pleurisy, massive tubercular mediastinal glands, Hodgkin's Disease, etc. Clark reports a case of chronic coughing which was cured by x-ray treatments over enlarged mediastinal glands which he considered tuberculous. I would also be suspicious of round worms which might have migrated into the lungs. Such cases have been reported. Selman had a patient with a round worm in the gall bladder. There is a feeling among certain abdominal surgeons that retroperitoneal growths might cause such a reflex as exhibited by this patient. This patient to me is pathetic and I do not see how his cardio-vascular system can stand such violent diaphragmatic exercise.

Dr. Gaines.

I want to say that we are very much indebted to Dr. Block for getting up such a splendid program for this clinical meeting.

Case I. This patient that Dr. Roberts referred to that Dr. Clark reported, was sent by me to Dr. Clark. The patient was a boy whose mother brought him to me for intense attacks of coughing that nothing would stop. She had taken the boy to a great many doctors and they had given him a "barrel of medicine." Nothing had had effect. I went over the boy very carefully and could find nothing to explain the cough, so sent him to Dr. Clark for an x-ray examination. I do not know if Clark was right or not. At any rate, he reports that the cough was relieved. I have not seen the boy since.

Case III. The last case, one would diagnose, of course, as typical tabes until the story is heard. Whether or not syphilis plays any part in his case I am not prepared to say. Sometimes we get negative Wassermanns on neurosyphilitic cases. In this connection, I have a case of tabes in which the spinal fluid gave a negative Wassermann. Two weeks later the fluid was drained and gave a four plus positive Wassermann. He then had three punctures with negative findings. Dr. Dowman is probably right in suggesting that this patient has multiple lesions. The location of these lesions is also most likely where he suggests them to be.

Dr. Block, in conclusion:

In the first case, I have thought of an abscess, pleurisy, and various other things.

The second case, when I first saw him, I thought was an ulnar nerve paralysis from injury. When it came on the other side I was confident of cervical rib. X-ray examination disclosed no cervical rib. Now he tells me about playing cards for 24 hours before the paralysis started, so it looks like pressure paralysis. Both sides are certainly affected.

The third case: The man at first could not say anything. Now he can talk so you can understand what is said. He cannot express himself and it is very difficult to make a thorough test. It is very difficult to make him understand what you want him to do so it has been hard to get the information desired. It seems that he has unquestionably a light ataxia. He has a red cell count of little more than three million, and I thought possibly he might have the spinal cord changes we get in pernicious anemia. Gastric test is not such as we find in pernicious anemia. Negative Wassermann on blood and spinal fluid certainly does not support the theory of syphilis, although it does not exclude it. He has had three cerebral attacks, but has never lost consciousness.

CHAS. E. DOWMAN, Sect'y.

County Society Reports

Chatham County Society

The following officers have been elected by the Georgia Medical Society (Chatham County Society) for 1923:

President—Dr. H. W. Hesse.

Vice President—Dr. St. J. R. de Caradeuc.

Secretary-Treasurer—Dr. F. Carson Demmond.

Board of Censors—Dr. H. T. Exley, Chairman; Drs. Robt. Drane and H. Y. Righ ton.

Home Committee—Dr. C. H. Meldrim, Chairman, Drs. W. R. Dancy, W. H. My-

ers, G. R. White and W. S. Wilson.

Endowment Fund Committee—Drs. T. P. Waring, Jabez Jones, Lawrence Lee, and H. H. Martin.

Delegates—Drs. H. Y. Righton and W. H. Myers.

Alternate Delegates—Drs. W. R. Dancy and J. W. Daniel.

The Committee on Arrangements for the State Association meeting May 2-4, 1923, is as follows: Dr. W. R. Dancy, Chairman, Drs. W. H. Myers, Chas Usher, Ralston Lattimore, the President and the Secretary.

Henry County Medical Society.

Henry County Medical Society announces the following officers for 1923:

President—Dr. E. G. Colvin.

Vice President—Dr. J. G. Smith.

Secretary-Treasurer—Dr. W. P. Sloan.

Emanuel County Medical Society.

Emanuel County Medical Society announces the following officers for 1923:

President—Dr. Geo. L. Smith.

Vice President—Dr. A. C. Johnson.

Secretary-Treasurer—Dr. L. I. Lanier.

Delegates—Drs. E. T. Coleman and R. C. Franklin.

Board of Censors—Drs. J. H. Candler, L. P. Youmans and D. D. Smith.

Campbell County Medical Society.

Campbell County Medical Society announces the following officers for 1923:

President—Dr. A. B. Jones.

Vice President—Dr. R. T. Camp.

Secretary-Treasurer—Dr. A. J. Green.

Delegates—Drs. W. R. Camp and A. J. Green.

Telfare County Medical Society

Telfair County Medical Society announces the following officers for 1923:

President—Dr. Leroy Napier.

Vice President—Dr. B. M. Kennon.

Secretary-Treasurer—Dr. S. L. Cheshire.

Delegates—Drs. J. K. Maloy, M. D. Council and G. A. Burch.

Board of Censors—Drs. M. D. Council, Leroy Napier and B. W. Yawn.

Thomas County Medical Society.

Thomas County Medical Society announces the following officers for 1923:

President—Dr. H. M. Moore.

Vice President—Dr. W. W. Jarrell.

Secretary-Treasurer—Dr. S. L. Cheshire.

Delegates—Drs. Harry Ainsworth and C. K. Wall.

Board of Censors—Drs. C. H. Ferguson, J. N. Isler and A. D. Little.

Sumter County Medical Society.

Sumter County Medical Society announces the following officers for 1923:

President—Dr. J. F. Lungsford.

Vice President—Dr. F. L. Cato.

Secretary-Treasurer—Dr. E. B. Anderson.

Delegates—Drs. B. T. Wise and J. C. Logan.

Board of Censors—Drs. S. P. Wise, Taylor Lewis and H. T. Simpson.

Turner County Medical Society.

Turner County Medical Society announces the following officers for 1923.

President—Dr. W. J. Turner.

Vice President—Dr. J. W. Bradley.

Secretary - Treasurer—Dr. John T. Moore.

Delegate—Dr. J. W. McElroy.

Brooks County Medical Society.

Brooks County Medical Society announces the following officers for 1923:

President—Dr. A. J. Smith.

Secretary-Treasurer—Dr. E. L. Jelks.

Delegates—Drs. J. R. McMichael and L. A. Felder.

Upson County Medical Society.

Upson County Medical Society announces the following officers for 1923:

President—Dr. H. A. Barron.

Vice President—Dr. E. W. Carter.

Secretary-Treasurer—Dr. R. L. Carter.

Delegates—Drs. A. H. Black and J. M. McKenzie.

Board of Censors—Drs. C. A. Harris, A. H. Black and E. W. Carter.

Elbert County Medical Society.

Elbert County Medical Society announces the following officers for 1923:

President—Dr. W. L. Bond.

Vice President—Dr. W. J. Mathews.

Secretary-Treasurer—Dr. B. B. Mattox.

Delegates Drs. O. B. Walker and W. J. Mathews.

Board of Censors—Drs. G. A. Ward, T. H. Gaines and D. V. Bailey.

Cobb County Medical Society.

Cobb County Medical Society announces the following officers for 1923:

President—Dr. Frank Mims.

Vice President—Dr. W. C. Humphries.

Secretary-Treasurer—Dr. L. L. Blair.

Delegate—Dr. L. L. Blair.

Morgan County Medical Society.

Morgan County Medical Society announces the following officers for 1923:

President—Dr. W. C. McGeary.

Vice President—Dr. F. M. Prior.

Secretary-Treasurer—Dr. J. H. Nicholson.

Delegates—Drs. D. M. Carter and J. L. Porter.

Board of Censors—Drs. F. M. Prior, C. F. Riden and J. H. Troutt.

Bibb County Medical Society.

Bibb County Medical Society announces the following officers for 1923:

President—Dr. C. C. Hinton.

Vice President—Dr. H. J. Peavy.

Secretary-Treasurer—Dr. O. R. Thompson.

Delegates—Drs. O. H. Weaver and T. E. Rogers.

Walker County Medical Society.

Walker County Medical Society announces the following officers for 1923:

President—Dr. J. M. Underwood.

Secretary-Treasurer—Dr. J. H. Hammond.

Jenkins County Medical Society.

President—Dr. M. E. Perkins.
 Secretary-Treasurer—Dr. C. Thompson.
 Delegates—Drs. M. E. Perkins and C. Thompson.
 Board of Censors—Drs. M. E. Perkins and C. Thompson.

Baldwin County Medical Society.

Baldwin County Medical Society announces the following officers for 1923:
 President—Dr. H. D. Allen, Sr.
 Vice President—Dr. Jno. W. Oden.
 Secretary-Treasurer—Dr. L. H. McCalla.
 Delegates—Drs. Geo. L. Echols and Richard Binion.
 Board of Censors—Drs. R. C. Swint, H. D. Allen, Jr., and J. I. Garrard.

Whitfield County Medical Society.

Whitfield County Medical Society announces the following officers for 1923:
 President—Dr. H. J. Ault.
 Vice President—Dr. Trammell Starr.
 Secretary-Treasurer—Dr. B. L. Kennedy.
 Delegates—Drs. J. C. Rollins and Trammell Starr.
 Board of Censors—Drs. B. L. Kennedy, J. C. Rollins and J. H. Steed.

Richmond County Medical Society.

Richmond County Medical Society announces the following officers for 1923:
 President—Dr. A. A. Davidson.
 Vice-President—Dr. W. W. Battey.
 Secretary-Treasurer—Dr. Jos. Akerman.
 Delegates—Drs. T. D. Coleman and T. E. Oertel.
 Board of Censors—Drs. Geo. A. Traylor, T. D. Coleman and S. J. Lewis.

Johnson County Medical Society.

Johnson County Medical Society announces the following officers for 1923:
 President—Dr. T. L. Harris.

Vive President—Dr. J. G. Brantley.
 Secretary-Treasurer—Dr. J. G. Brantley.
 Delegate—Dr. R. E. Brinson.

Warren County Medical Society.

Warren County Medical Society announces the following officers for 1923:
 President—Dr. F. L. Ware.
 Vice President—Dr. G. R. Maner.
 Secretary-Treasurer—Dr. A. W. Davis.
 Delegates—Drs. H. L. Earl and F. B. Ricketson.
 Board of Censors—Drs. F. B. Ricketson and G. R. Maner.

Cherokee County Medical Society.

President—Dr. N. J. Coker.
 Vice President—Dr. J. M. Bates.
 Secretary - Treasurer—Dr. George C. Brooke.
 Delegates—Drs. R. M. Moore and N. J. Coker.
 Board of Censors—Drs. T. J. Vansant, J. R. Boring and J. T. Pettitt.

Worth County Medical Society.

Worth County Medical Society announces the following officers for 1923:
 President—Dr. J. L. Tracy.
 Vice President—Dr. W. W. Sessions.
 Secretary-Treasurer—Dr. W. C. Tipton.
 Delegates—Drs. H. S. McCoy and W. C. Tipton.
 Board of Censors—Drs. H. S. McCoy, G. S. Sumner and J. J. Crumbley.

Bartow County Medical Society.

Bartow County Medical Society announces the following officers for 1923:
 President—Dr. W. E. Wofford.
 Vice President—Dr. R. E. Adair.
 Secretary-Treasurer—Dr. T. Lowry.
 Delegate—Dr. T. Lowry.

McDuffie County Medical Society.

McDuffie County Medical Society announces the following officers for 1923:
 President—Dr. Sterling Gibson.
 Secretary-Treasurer—Dr. R. Y. Pryce.

Twiggs County Medical Society.

Twiggs County Medical Society announces the following officers for 1923:

President—Dr. A. J. Wood.

Vice President—Dr. H. A. Rogers.

Secretary-Treasurer—Dr. S. W. Ray.

Delegates—Drs. T. S. Jones and J. G. Slappey.

Board of Censors—Drs. J. G. Slappey and T. S. Jones.

under the Department of Occupational Therapy and under the direction of Miss Amy Oxford.

Dr. R. C. Swint has been elected as superintendent of the Georgia State Sanitarium. He came to the State Sanitarium in 1901 and was elected clinical director in 1917, which post he held until his promotion to superintendent.

News Items

Dr. Katherine Collins has been appointed Assistant Bacteriologist to the City of Savannah.

The War Department Appropriation Bill reported by the Senate Committee provides an item of \$275,000 for the construction of a hospital at Ft. Benning and \$50,000 for experimental work by the Chemical Warfare Service for chemicals to kill the boll weevil.

A final drive against trachoma in Mitchell County has been started by re-establishing the eye clinic in the hospital at Pelham, Ga. by the U. S. Public Health Service.

Jones county has recently organized a health board.

The purchase of a complete radio outfit has been made possible at the Georgia State Sanitarium at Milledgeville through the sale of baskets and rugs made by the occupants. Officials say it is now possible to give entertainments in any building to the several thousand patients. Arrangements have been made to have regular concerts and to provide the inmates with a source of diversion. The radio is placed

Clarke County has organized an Anti-Tuberculosis Association. A full time nurse will be employed under direction of the chairman Clarke County Board of Health.

Dr. J. A. Thomason announces the removal of his offices from Fairburn, Ga., to East Point, Ga.

A memorial tree was planted for Dr. Crawford W. Long at Waycross, Ga., January 13th, by the children of the public schools, in honor of Dr. Long, the discoverer of anaesthesia.

Ambler Heights Sanitarium celebrated its first anniversary and opening of New Wing, Tuesday, February 20, 1923.

The State Board of Health, division of child hygiene, is now furnishing free on request, one per cent solution of silver nitrate.

Mrs. Arzaner Jackson, R. N., Forysth, Ga., announces the opening of a nursing home for the care of nervous cases and old age.

The Clinical Congress of American College of Surgeons of Florida, Georgia and Alabama sections, held their meeting at the Hotel Seminole, Jacksonville, Fla., January 29th, 1923. A very interesting round table discussion of Hospital Standardization was rendered.

Drs. J. C. Patterson and W. W. Crook, Cuthbert, Ga., have been taking post graduate work in New Orleans.

Dr. T. F. Harper, Coleman, Ga., president of Randolph County Medical Society, has left for Newnan, Ga., to enter the practice there.

Dr. G. Y. More, has been elected city physician, Cuthbert, Ga.

Dr. John H. Cooper, Atlanta, announces opening of offices 728-729 Candler Building. Practice limited to diseases of the eye, ear, nose and throat.

Dr. H. F. McDuffie, Atlanta, announces the removal of his offices to 350 W. Peachtree, at Fourth Street. Eye, ear, nose and throat.

The Piedmont Sanatorium, Atlanta, takes pleasure in announcing that Dr. A. G. Kelly has taken charge of the pathological laboratory and will give his personal attention to all work submitted to the laboratory.

Dr. Frank Eskridge, Atlanta, announces the removal of his offices to 350 West Peachtree, at Fourth Street.

Dr. Wilborn A. Upchurch and Dr. Stephen T. Brown, announce their association as, Drs. Upchurch and Brown, Suite 517 Peters Building, Atlanta. Practice limited to genito-urinary and venereal diseases.

Dr. Cassius L. Peacock announces the opening of offices, 1026-7 Candler Building, Atlanta, Ga. Practice limited to Urology.

Automobile Insurance.

The Medical Society of Virginia is to organize a mutual automobile insurance company. According to notices sent out by G. H. Winfrey, secretary-treasurer, their company will charge the full standard rates the first year and thereafter actual losses and expenses—pro-rata. Based upon their investigations they state that the actual liability losses require only ten per cent of the present premiums charged. The medical associations of other states will watch this new venture of Virginia with interest.

The Doctor Sofie A. Nordhoff-Jung Cancer Research Prize.

Dr. Sofie A. Nordhoff-Jung, of Washington, District of Columbia, United States of America, has founded an annual prize of five hundred dollars bearing the title of "The Sofie A. Nordhoff-Jung Cancer Research Prize." This prize is destined for the encouragement of researches in the etiology, prevention and treatment of cancer. It will be awarded by a commission, composed of members of the University of Munich, Bavaria, and be granted for the first time in December in the year nineteen hundred and twenty-three. The commission consists of professors Borst, Doederlein and Sauerbruch, with Professor von Romberg as chairman. This body is empowered to elect successors. The award will be made as a recognition of the most conspicuous work in the world literature bearing on cancer research, done at a time antecedent to the allotment of the award. Though the prize will not be awarded on a competitive basis the commission invites all research workers in cancer to submit literature on this subject.

The Nurses' Registry of the Doctors' Exchange, Atlanta.

Eighteen months ago the Doctors' Exchange started a Nurse Registry in connection with the Exchange. At that time the graduate nurses' fee was governed by the State Nurses' Association, and was supposed to be the same throughout the state, and there was an organization in Atlanta where white graduate nurses could receive and be assigned to the calls. But there was outside of that a small army of women preying upon the public. There was no organization that could look into the credentials of the undergraduate and practical nurse or that handled calls for the colored graduate nurse, although Atlanta has two institutions that turn out well equipped colored nurses every year, or that handled calls for the male nurse. The Doctors' Exchange has made an effort to improve these various phases of the nursing service.

There are in Atlanta practicing at present about 300 graduate nurses and an almost equal number of undergraduate and practical nurses. The Exchange to date has entered upon its rolls about 325 nurses of the various classifications.

The Register carefully looks up the references furnished them by every nurse; two names of physicians for whom they have nursed being required from every graduate in addition to her papers of identification. Three references are required from each under-graduate and four from each colored nurse.

Many who apply for registration cannot be accepted, neither are those retained against whom repeated complaints are made, although every side is carefully looked into before dismissal. A systematic record of the nurse and her qualifications is kept on file.

The undergraduate's fee is then rated according to the amount of hospital training she has had, where obtained, experience since, apparent education and personality, and ranges from \$21.00 to \$35.00 per week. The practical nurse's fee is based upon the same premises and ranges

from \$12.00 to \$25.00 per week. For the past several years the graduate nurse's fee has ranged from \$35.00 to \$42.00 per week, dependent upon the kind of case and time involved. Within the past few months graduate nurses in various cities throughout the state have increased the above rates, resulting, of course, in a great deal of confusion to the public, the doctors and the nurses as a class. The action to raise the rates was not, for a number of reasons unanimous. The Doctors' Exchange Registry desires to serve everyone concerned fairly and wants to give wide publicity to the fact that hereafter they will have graduate nurses at both rates, some from \$35.00 to \$42.00, the old rate, others, or registered nurses, from \$38.00 to \$45.00, the new rate. Every graduate from their registry will carry a card that will state exactly what she should receive for her services. They hope that this will eliminate as much as possible the confusion resulting from the different prices.

The colored graduate nurse's fee ranges from \$25.00 to \$35.00 a week, as they find that with very few exceptions the public will not pay the same price for the colored nurse as for the white nurse. The male nurse receives from \$25.00 to \$50.00 a week.

On the registry are graduate nurses from all local hospitals and from many other hospitals in the United States. Out of every 100 graduates only 25 are A1 in every respect, 25 are poor nurses, badly trained, which in the course of one or two years are eliminated from the profession, and 50 are mediocre. A registry very soon finds out the nurses standing with the public, the hospitals and the physicians. The aim is, in so far as possible, to fit the nurse to the particular case. Some are splendid surgical nurses but not so good for babies, some are fine obstetrical nurses but not so good for nervous cases, and so on. Atlanta being a medical center serves at least a radius of 150 miles with nurses, so they use the same careful consideration in serving an out of town call.

In conclusion, it is the aim to please

three people on every call, the patient, the nurse and the doctor.

DOCTORS' EXCHANGE.

Book Reviews

Books Reviewed.

Greene's Medical Diagnosis. Fifth edition, revised and greatly enlarged, Octavo 1473; an increase of 152 pages over the former edition, 637 illustrations including 14 colored plates; 75 more illustrations than the former edition. Cloth, \$12.00. By Charles Lyman Greene, M. D., formerly Professor of Medicine and Chief of the Medical Department, University of Minnesota and Chief of Medical Clinic, University of Minnesota Hospitals. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia.

Every section has been expanded by important additions. The rise of diseases of the heart and blood-vessels to first place on the list of causes of premature death makes imperatively necessary a better understanding of the now unrealized possibilities along the lines of their early recognition, prevention, and retardation.

The means of early and accurate diagnosis now available to the physician are further emphasized.

The author has greatly expanded the sections dealing with polygraphic and electrocardiographic technic and interpretation.

Among the many additions to the text, is the discussion of "influenza" and the interesting and unique radiograms of Dr. Hunter Selby, illustrating the development and course of that "hemorrhagic pneumonitis" which gave to the epidemic of 1919 its terrific mortality.

The "Symptom Index" incorporated in this edition must greatly increase the usefulness of the volume.

The Thyroid Gland, by George W. Crile, M. D., and associates at Lakeside Hospital, Cleveland, Ohio. Second edition revised with 105 illustrations, 297 pages. W. B.

Saunders Co., Philadelphia and London, 1922. Cloth, \$5.00.

The appearance of the second edition of this book after the lapse of twelve months, is in keeping with the announced purpose of the author set forth in the introduction to the first edition—"That this and the succeeding volumes in the series, shall faithfully present the viewpoint and practice of the day." This issue, therefore, is up to date, and places at the disposal of those interested in diseases of the thyroid gland, the practices and methods employed in Lakeside Hospital Clinic, in dealing with the various manifestations of thyroid derangement. Since it has been the experience of the author and his associates, that the methods applicable today may be found obsolete tomorrow, especially concerning thyroid affections, and to the end that the Lakeside clinic may present living methods, it is proposed to frequently revise the book in order that the obsolete may be culled and the advances adopted, incorporated.

The second issue, while essentially the same as the first in its major portions, has been modified to include certain facts that have been developed as a result of increased experience over the past twelve months.

The book commends itself to physicians everywhere, who are desirous of informing themselves on results of surgical management of goitre. It springs from the experience of one of the world's foremost exponents of surgical treatment for thyroid affections. Thousands of cases given intensive and specialized study in the hands of an interested group of experts and hospitalized under advanced conditions for specialized treatment, have furnished a wealth of clinical material, making it possible for the author to lay down definite rules for classification, diagnosis and treatment. The book is concise, readable, definite in its conclusions and convincing in its arguments. The demand for it has been prompt, and the ability of the publishers to supply has been over-taxed.

Pertinent questions are dealt with by

various members of Dr. Crile's clinic organization, including such essential topics as thyroid function, pathology; complications encountered; differential diagnosis; basal metabolism studies; preventive measures; x-ray and radium therapy; pre and post-operative methods, technic of operations; post-operative, hospital and nursing care and rules of living for thyroid sufferers.

The introductory chapter declares the faith that is in the author and centers around the following main points:

(a) Endemic goitre is an iodine deficiency disease and may be prevented by iodine administration to pregnant mothers, and to children up to and through adolescence.

(b) The use of iodine in goitre is a two edged sword and may convert a quiescent goitre, especially of the adenomatous type, into the hypersecreting class. He thus warns against its indiscriminate use.

(c) Basal metabolism estimations provide a valuable but not specific test for the presence of hyperthyroidism.

(d) Preliminary ligations are necessary in the management of approximately forty (40%) per cent of hyperthyroid cases subjected to operation.

(e) Surgical treatment is recommended for all cases regardless of the degree of hyperthyroidism or the complications, basing his opinion upon the associated results of the handling of more than five thousand cases.

C. W. ROBERTS.

Books Received.

"Nutrition of Mother and Child" (Lippincott's Nursing Manuals. C. Ulysses Moore, M. D., M. Sc., (Ped.) Instructor in diseases of children, University of Oregon Medical School, including menus and recipes by Myrtle Josephine Ferguson, B. S., B. S., In H. Ec., Professor of Nutrition, Iowa State College, Ames, Iowa. J. B. Lippincott & Co. Price \$2.00.

New and Non-official Remedies.

Digitan Ampules (for hypodermic use).—Each cc. contains 16 minims (1 cc.) of sterilized solution of digitan (see New and Nonofficial Remedies, 1922, p. 105), equivalent to digitan, $1\frac{1}{2}$ grains (0.1 gm). Merck & Co., New York.

Digitan Solution (for oral use):—1 cc. contains digitan (see New and Nonofficial Remedies, 1922, p. 105) $1\frac{1}{2}$ grains (0.1 gm.). Merck & Co., New York. Jour. A. M. A., Jan 13, 1923, page 106.

Bacillus Diphtheroid Allergen—Squibb.—Prepared from the protein from bacillus diphtheriae.

Staphylococcus Citreus Allergen—Squibb.—Prepared from the protein from Staphylococcus Citreus.

Bacillus Influenzae Allergen—Squibb.—Prepared from the protein from bacillus influenzae. For a description of the bacterial allergens—Squibb, see New and Nonofficial Remedies, 1922, p. 247.

Egg Yolk Globulin Allergen—Squibb.—Prepared from the purified globulin of yolks of hen's eggs.

Horse Serum Allergen—Squibb.—Prepared from protein of normal horse serum.

For a description of Food Allergens—Squibb, see New and Nonofficial Remedies, 1922, p. 241. E. R. Squibb & Sons, New York. (Jour. A. M. A., Jan. 27, 1923, p. 251.

During January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Lederle Antitoxin Laboratories: Bacillus Acidophilus Milk—Lederle.

E. R. Squibb & Sons: Bacillus Diphtheroid Allergen—Squibb. Staphylococcus Citreus Allergen—Squibb. Bacillus Influenzae Allergen—Squibb. Egg Yolk Globulin Allergen—Squibb. Horse Serum Allergen—Squibb.

Winthrop Chemical Company: Theocin Sodium Acetate.

Pregnant Paragraphs

Members of the profession often have in mind observations which they would like to pass on to their fellow practitioners, but which do not require a formal or lengthy paper. It is for the publication of such bits of writing that the Department of Pregnant Paragraphs is instituted. Contributions are invited from all members of the Medical Association of Georgia. No paragraph should consist of more than two hundred words.

Writing Medical Papers. Of course the first requisite for writing a paper on a medical subject, or any other subject, is that one must have something to write about. But this is not all. It takes practice in writing. The young doctor should begin at once to write. No matter what literary degrees he holds, nor how well prepared he is in medicine, if he thinks he can postpone writing his first paper until he has practiced medicine for five or ten or more years, and then be able to blossom out spontaneously with an article of great merit, he will find that he is mistaken. Osler could not have done it, nor could any author accomplish such a feat in any field of literature. The young physician should write one or two papers a year, for the practice it will give him, whether he can find much to write about or not, and whether his efforts ever reach the printed page. Through such exercise he will gain confidence in his ability to express himself, and will sooner feel that he has something of value to tell the profession, and will know how to do it. Do not allow your literary education to grow stale.

F. K. B.

Intravenous Use of Quinine in Malaria.

Limitations to the use of quinine intravenously in malaria treatment is the subject of a report by Dr. K. F. Maxcy just published by the U. S. Public Health Service.

When quinine is given intravenously by routine in malaria treatment it can hardly be claimed that the procedure is without danger. The sudden introduction of a concentrated solution into the blood stream tends to cause circulatory depression and distressing nervous phenomena. Accidental extravasation into the tissues

at the point of injection is apt to cause local necrosis and sloughing. Against these dangers is the unquestionable rapidity with which the drug is brought into contact with the parasites in the blood stream. Except for this there is no clear evidence at present that in ordinary malaria infections the method is more effective than mouth administration in curing an acute attack, in ridding the blood of sexual forms, or in preventing relapse.

Its proper field of usefulness seems to be upon urgent clinical indications of two sorts: first, in cases in which prompt absorption by the gastro-intestinal tract, following mouth administration, is not to be expected because of violent gastro-intestinal disturbance or other cause, or in which it is impossible to give the drug by mouth on account of delirium, coma, etc., and second, in cases which are gravely ill when first seen by the physician and in whom it is deemed imperative to secure immediate cinchonization. It does not seem necessary nor desirable to use the intravenous route of administration in the simple acute or chronic infections ordinarily encountered, whether tertian or aestivo-autumnal.

When the clinician decides that the method is warranted, the effect upon the patient must be borne in mind. Particularly is it necessary to be sure that the patient is not already suffering from circulatory embarrassment. The technique of the injection must be such as to minimize the danger of untoward effects by observing three cardinal principles: Careful antiseptic technique; giving the drug in moderate doses and in dilution; and introducing the solution slowly.

All the precautions which are observed in giving a dose of salvarsan should be observed in giving quinine.

Classic Dancer—"Doctor, I want to be vaccinated somewhere where it won't show."

Doctor—"My dear young lady, I am afraid I will have to do it internally."

Obituary

Dan Hughes DuPree,
1883-1923.

I would that I had the poet's gift, that I might portray him as I knew him intimately in his walk through life; upright, honorable, standing for the truth in all things, a devoted husband and father, true and faithful friend, loyal to the precepts of his profession, thorough, able, a careful student and conscientious physician.

His friends were my friends. Intimately I have known him since he came to Athens, and in that time I have come to lean upon him as I would a brother. In him I have lost a friend, and the world has lost a man.—J. P. P.

Died February 22nd, 1923., Dr. Dan Hughes DuPree, of angina pectoris, after an illness of three hours.

Dr. Dupree was born at Danville, Ga., on January 26th, 1883, being the only son of Dr. and Mrs. Ira E. DuPree.

Dr. DuPree received his early education in the graded school at Danville, and entered the freshman class of the University of Georgia in 1899, graduating with a B. S. degree in 1903. He was a member of the Sigma Nu Fraternity. He entered Johns Hopkins Medical School in the fall of 1903, receiving the degree of Doctor of Medicine in 1907. Dr. DuPree began active practice of medicine in Athens in 1908.

On November 3rd, 1909, he married Miss Bertha M. Greer, who, with their two sons, Richard Greer, age 10, and Dan Hughes Jr., aged 4, survives him.

In 1911 he spent three months in the K. K. Universitat Zu Wien, devoting his time to the study of the diagnosis of medical diseases.

Returning to Athens, he confined his efforts to the diagnosis and treatment of medical diseases until January, 1913, when he was chosen Chief of the Medical Clinic in the Medical Department of the University of Georgia, Augusta, Ga., which position he held until 1914, when he returned

to Athens to take up active practice as an internist.

In 1915 he was elected College Physician to the University of Georgia and placed in charge of Crawford W. Long Infirmary; the perfection of which was largely due to his marked executive ability.

At the entrance of the United States into the World War in 1917, he volunteered into the medical corps, serving as a member of the Clarke County Examining Board until he was called to active service in February, 1918, and assigned to Emory Unit with the rank of First Lieutenant. After several months of preliminary training, he was sent to France with Base Hospital No. 43, after having been promoted to a captaincy. While in service in France, he was decorated for distinguished service.

Returning from France in 1919, after having been promoted to the rank of Major, he was immediately discharged from the service and returned to Athens to take up his work as an internist.

In 1921, at Baltimore, he was made a Fellow in the American College of Physicians and received the degree F. A. C. P.

After his discharge from the medical corps of the United States Army, he was honored for distinguished service by the French government by being chosen a member of the Order of Palms.

At the time of his death he was president of the Clarke County Health Board, a member of the Board of Directors of the Athens Y. M. C. A., an active member of the Kiwanis Club of Athens, serving upon its Board of Directors.

His efforts were always for the uplift and progress of his chosen profession, as an evidence of which he bore the love and respect of all of his medical confreres.

Dr. R. B. Ridley, Sr.

Dr. R. B. Ridley, Sr., age 80, died January 23rd, 1923, Davis-Fischer Sanatorium, after an illness of a few days of pneumonia.

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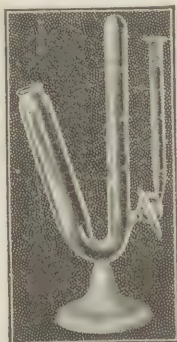
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No. 4

A BRIEF REVIEW OF THE TEACHINGS OF SPENCER AND FREUD AS RELATED TO PSYCHIATRY.*

James N. Brawner, M.D.
Atlanta, Ga.

It will probably be wise for some member of this society to occasionally present a general review of some broad subject connected with neurology and psychiatry. In such a review very little may be presented that is new, but it will serve to refresh our memories on important subjects.

In looking over the literature on psychology I was struck by the fact that the works of two men stand out in bold relief among all the others, and it is hard to estimate the profound influence that the writings of these men have had on our modern conception of mental phenomena, both in health and in disease. These men are Herbert Spencer and Sigmund Freud. Spencer's, though he worked out in greater detail, complete and revolutionary. He changed our ideas of mental phenomena completely. Freud's work corroborates Spencer's, though he worked out in greater detail certain mental mechanisms that are especially interesting to psychopathologists.

It might be well to recall that Spencer's work on psychology is a part of his system of philosophy, in which he explained the theory of evolution as applied to biology, psychology, sociology and ethics. Spencer, Darwin, Huxley and Haeckel all came along about the same time. Darwin's work had a sudden and profound influence, but it is probable that the works of Spencer are destined to have a much greater influence over the thoughts and

beliefs of men than any other writer of modern times.

About the year 1855 Spencer commenced to write on mental phenomena, and he treated the subject from an evolutionary point of view. This was four years before Darwin wrote the "Origin of Species," which created such a profound sensation in religious and scientific circles. Up to the time of the publication of Darwin's "Origin of Species" Spencer's writings had attracted but little attention except among a few scientific men such as Tyndal, Wallace, J. S. Mill and Huxley. Spencer was a close friend of Thomas Huxley; and Huxley, being a biologist and physiologist, was able to help Spencer a great deal by his frank criticisms, especially along biological lines. Up to Spencer's time no man, so far as I know, had treated the phenomena of mind from the standpoint of evolution. When we consider how little was known about the minute anatomy of the nervous system in Spencer's day, it is truly remarkable that he wrote such an accurate work describing the evolutionary development and functions of the nervous system, and his descriptions and conclusions have been almost wholly corroborated by the immense amount of work that has since been done. Spencer went into great detail, describing how the simple nervous system in the lower forms of animal life gradually evolved from the other tissues; and how the nerve cells differentiated from the other cells; he then described how the more complex and higher nervous systems evolved from these lower types; and then, finally, he considered how the cerebral hemispheres and cerebellum gradually "grew out of" the mid-brain and basal ganglia. Spencer described reflex action as well as it could be de-

*Read before the Atlanta Neurological Society, January 26, 1923.

scribed today and showed that this is the most primitive method by which an animal adjusts itself to its environment. He then told us about the sensori-motor mechanism that enables animals to adjust themselves to more involved environmental conditions, especially through the sense of pain and touch. After this he treated of the functions in the higher brain centers, including that of man. He maintained that the functions in these highest and most complex centers are for the purpose of adjustment to the most complex and remote environmental situations to which an animal is exposed, both in Time and Space. He claimed that the most probable function of the cerebellum was to co-ordinate the compound bodily movements in relation to Space. We now know that this idea of the functions of the cerebellum was nearly correct. He stated that it was probable that the most general function of the cerebral cortex was for the purpose of co-ordinating all our activities in relation to Time, and the consciousness was largely concerned in making Time co-ordinations; that is, looking before and after, and that consciousness, feeling and intelligence were largely the result of the functioning of the cerebral cortex. Spencer wrote before we knew anything about cortical localization of functions; but he stated that, judging from the general law of evolution, different parts of the cortex should have different functions, but that there would be no sharp functional demarkations, and that the areas would overlap each other. He explained how association fibres would go from one part of the cortex to the other, and described the anatomical basis for the association of ideas and feelings.

After describing the evolutionary development of the nervous system, Spencer considered psychology from the same point of view. In this his work was so complete and accurate that very few errors have been found in it and his teachings are now beginning to find their way into all textbooks and writings on psychology and psychiatry.

In this brief review I can mention only a few of the conclusions arrived at by Spencer: His classification of the intellectual faculties and feelings; his discussion of perception, reason, will and imagination will have to be passed over, and I will review only that part that is of interest to psychopathologists.

In this summary I will mention:—

1. All knowledge is relative, and we know all things in terms of symbols and not as they actually are. This is now being realized by nearly all writers on psychology and allied subjects, as is shown by the classification used by Jelliffe and White in their textbook on nervous diseases, where they use the term "psychical or symbolic system." Spencer proved that objects or the relation of objects, on the outside of us, affect our minds on the inside of us, only through the intermediation of nerve impulses coursing along the nerves, and, passing finally to the cortex; that our idea of an object is a picture, so to speak, or a symbol of things or combination of things affecting our senses. He thus showed that we could not, and did not, know things as they really are, but that our perceptions and ideas simply **correspond** to objects or situations on the outside. In other words, we talk in symbols, we think in symbols, and we know things only in symbols.

2. Spencer proved that all **instinctive** actions are the result of firmly organized connections in the nervous system that have originated through a process of selection and adaptation. Those individuals that reacted to a situation in a way best suited to preserve life, either to the individual or to the species, survived and transmitted this character to the offspring. In the lower animals most of their actions are instinctive and unconscious.

3. In man, the highest animal, and even in the highest type of man, his conduct and general behavior are regulated more by his **feelings** than by his thoughts. Spencer showed that our feelings, such as hatred, fear, love, the maternal instinct, etc., are more firmly fixed in our organic

make-up than are our ideas, which have been more recently acquired. He explains this from the standpoint of evolution and shows that our state of feelings form a larger part of what we know as mind than our thoughts do.

4. Man, with all his achievements, with all his altruistic and religious emotions and abstract thoughts, is a product and resultant of the accumulated experiences to which all his ancestors have been exposed through an immeasurable past. It was during the aquatic stage of his existence that man acquired the fundamental type of his organization; that is, the vegetative nervous system, spinal cord, mid-brain and the beginning of the cerebrum and cerebellum. The special senses developed during this part of our evolution. No doubt these aquatic ancestors of ours developed certain states of feeling in a rudimentary form, that we have today, such as hunger, fear, and the craving for the company of others—the beginning of the herd instinct, one of the most fundamental instincts of the human race. Our ancestors then gradually left the water and became air-breathing animals, and finally reached the marsupial stage, and then the ape-man stage. In these stages, no doubt, he passed many millions of years, during which his cerebral cortex gradually grew in size and complexity, corresponding to the increased mental growth necessary to his adjustment to the ever-widening and more complex experiences to which he was exposed. During this period many of our faculties, feelings, emotions and instincts were developed, and many of these faculties are still of value to us today; but many of these primitive feelings and emotions have not only become useless to us, but when developed, are actually detrimental to our welfare and to society as at present constituted. Then came primitive man; his brain became larger, and he began to think as his experiences became wider and wider. He developed tribal warfare and this lasted for so many generations that his desire for fighting and warfare became organic and instinctive, and

to this day it is one of the fundamental instincts of the human race, except in a few who have developed the intellectual type of mind.

While Spencer dwelt at great length on the fact that our general make-up and psychological tendencies were largely hereditary and represented the accumulated experiences and adaptations of our ancestors, he did not neglect or under-value the importance of education and training, especially in early life. One of the first books that he wrote was on education, and while his ideas were largely at variance with those of his time, I have noticed that the methods which are being introduced in the schools of today correspond very closely to what he recommended seventy years ago.

In 1895, Breuer and Freud published a monograph on "Studies in Hysteria." This paper did not attract much attention at the time, but after Freud had written several other papers his ideas concerning mental mechanisms commenced to attract attention. He laid great stress on the sex and love life of the individual, and especially sexual traumas in the first three or four years of life. On account of this, his theories received a great deal of criticism, particularly from the older members of the profession.

Freud claimed that in the sexually normal the psycho-neuroses never occurred; and that in the psycho-neurotic, sexual trauma always occurred, and usually in very early childhood, and in the majority of cases the incident had been forgotten. Associated with the sexual insult, shame and reproach occurred, and all ideas connected with the event were painful to the patient, who attempted to forget all about it. In other words, he "repressed" the idea and the emotions associated with it into the unconscious. The repression caused nerve energy to be "pent up" and it escaped through abnormal channels, causing hysterical and psycho-neurotic symptoms.

This theory led up to a whole psychological literature about repression of the

normal sexual instincts, even in normal individuals, on account of the conventions of society, and he showed how these pent-up desires were sublimated through hard work and especially through altruistic social activities.

Freud laid great stress on the fact that we always endeavor to forget and push into the unconscious mind all incidents of life that are painful and disagreeable to us. Carried to a normal extent, this is very valuable to the individual and no doubt saves us from many a mental anguish.

Freud found that hypnotized patients frequently could remember all the incidents of the sexual trauma, which he supposed was the sole cause of the neurosis, even when they could remember nothing at all about the trauma when awake. He then commenced to compare the hypnotic state with normal sleep and the dreams that occur. He then began to write about dreams and dream analysis. He came to the conclusion that dreams are largely "wish fulfilling." In neurotics, and to a less extent in normal people, there are certain strong desires (which in our primitive ancestors had a normal outlet without the taboo of society) constantly striving for expression; but the conventions of society will allow these only to a limited extent. In the dream, these desires are gratified and fulfilled in a sort of imaginary way, though nearly always in a disguised form. Day dreaming, air-castle building, the delusions of the paranoiac, who thinks she is the queen of the world, according to Freud, belong to this wish-fulfilling mechanism. He also claims that many of the delirious and confusional states are due to this same mental mechanism. Freud, in considering paranoia, claimed that it developed out of homosexual wish phantasies. He also claimed that homosexuality was due to the fixation of the libido on self instead of on one of the opposite sex. I might state, however, that homosexuality is now known to result from endocrine disturbances. It has been shown that the male homosexual has some of the ovarian

internal secretory elements embedded among the interstitial cells in the gonads. In other words, the homosexual is chemically part male and part female.

The psychopathology of every-day life was then considered by Freud. He claimed that our unconscious wishes were always striving for expression by devious ways. He tells us why we forget the names of some people and remember others; why we misplace bills; why we mis-send some letters and make mistakes in reading writing, etc. He considers at length symbolic actions. He tells us why the divorced and unhappy woman is always writing about the blissfulness of married life. Freud says that when we dream about seeing some of our loved ones dead we are, in our unconscious mind, wishing they were dead. Freud considers wit, myths and religious rites as various ways of expressing, symbolically, unconscious strivings that demand expression.

We thus see that the works of Spencer led the way to our present conception of the functions of the nervous system and the studies of Freud to certain mechanisms of mental phenomena. We are thus better prepared for a study of mental abnormalities. In this country, Jelliffe, W. A. White, Adolph Meyer, Barker, T. A. Williams, Brill, Tilney, Herrick, Crile, Bruce, and many others, have done valuable service in applying these principles to the study of human conduct and mental diseases.

When studying the various types of idiocy and imbecility, as well as all the different grades of criminality, if we remember the phylogenetic history of man, the whole question clears up immediately, remembering, of course, the modifying effects of physical diseases and environmental surroundings. We are only a few generations from the cave-man, and are only imperfectly adapted to the industrial type of society. The majority of people thus need some kind of coercion to keep them in the "straight and narrow path," and occasionally in some, vestigial or atavistic instincts crop out that cannot be controlled

by the higher feelings. These people are criminals or moral defectives from birth. Our understanding of that type of disease known as dementia precox becomes clearer. When we remember that our highest faculties have only recently been acquired and are represented in the cortex of our brains by the most complex and delicately balanced architectural and chemical structures, we can see why, under any undue strain, either mental, endocrine or chemical, they are the first to disintegrate. When this occurs the psychic life of the patient sinks to a lower level, represented by more firmly organized and less complex brain structures. We can also understand why certain cases of paresis dement to the point where they have the mind of a lower animal, sitting on the floor, naked, picking to pieces articles of clothing, having no intelligence or feeling save that of his arborial ancestors of a million years ago. In such a case, spirochetes have destroyed the outer layers of the cortex, representing the highest faculties, leaving only the primitive and firmly organized sub-structures.

Freud and his disciples have certainly taught us a great deal about hysteria and compulsion neuroses and certain other functional nervous disturbances. We now know, however, that sexual trauma is not the sole cause of phobias, etc. Any emotional shock, especially in childhood and if long continued, may produce any of the psychoneuroses, especially in a timid or neurotic patient. Recognition by a sensitive child that she is ugly or is inferior physically or mentally to other children is also very detrimental to her proper development. This brings into play what is known as the "inferiority complex" of Adler.

There are certain other functional nervous cases, however, that are not the result of any of these causes. We see these cases among the intellectuals or sedentary brain workers. Darwin, Spencer, Huxley, Tyndal and Faraday, all became nervous invalids, with no special organic trouble.

In his latter years, Spencer's nervous system was so delicately balanced that he rode in a hammock suspended in a carriage. Fifty years ago invalidism among the intellectuals was so common that it was actually fashionable to be an invalid. If Spencer and the rest of these men had played golf three times a week, and at the same time continued their other work, I hardly think that they would have become neurasthenics. The reasons for this opinion may be summed up about as follows: First, intellectual work, if long continued, is exceedingly taxing on the most recently acquired and, consequently, the least stable part of our brain. Very few have become completely adapted to the intellectual type of life. Second, when these most recently acquired faculties are used excessively, we fail to exercise certain other faculties, especially those used for thousands of generations by our ancestors—the "hunting faculties," for instance—which are still well developed in the majority of people but are repressed by the exigencies of civilization. These "hunting faculties" strive for expression, though much more in some than in others.

In playing golf or, for that matter, in hunting, fishing, baseball, and other sports, the brain-worker rests completely his higher faculties. He gets physical exercise which his ancestors got in the chase, and brings into play many other primitive thoughts and emotions. He watches intently a moving object, follows and hunts the ball, frequently in the rough; he gloats over his successes and gives excuses for his failures, and he talks to his companions in the simple jargon his ancestors talked a hundred thousand years ago. We thus see that in playing golf, and in other recreations, man brings into play those primitive faculties that are so well organized in him and are constantly striving for expression. If he is an intellectual worker, it brings about that equilibration of physical and psychical activities that are so essential to a long and useful life.

THE NON-SURGICAL TREATMENT OF HEMORRHOIDS IN POOR SURGICAL RISKS

Marion C. Pruitt, M. D., F. R. C. S.

Atlanta, Ga.

In choosing the subject, *The Non-Surgical Treatment of Internal Hemorrhoids in Poor Surgical Risks*, I leave out of consideration the surgical cases that could with reasonable safety take a general anesthetic and limit my discussion to those cases that need surgical aid and yet have some pathological condition where a general anesthetic is contraindicated and a local anesthetic is very unsatisfactory.

As no one method of treatment is suitable for a type of hemorrhoids, it is necessary to have a classification.

Anatomically, two varieties are recognized—external and internal.

External hemorrhoids are located outside of the anus and consists of dilated anal veins covered with skin and mucous membrane in varying proportions and implicate the inferior hemorrhoidal veins.

Internal hemorrhoids are located within or above the sphincter ani and consist of the dilated terminal branches of the superior hemorrhoidal veins. Frequently both varieties co-exist and are then called mixed hemorrhoids.

External Hemorrhoids: Under the term external hemorrhoids several different conditions are included. 1. A dilatation of the veins surrounding the anal orifice, the turgescence of which is only evident when the patient strains, forming a distinct cushion-like ring around the anal margin. 2. **Venus or Thrombotic Hemorrhoids:** Frequently extravasation of blood takes place around a dilated anal or peri-anal vein, which has been ruptured by violent straining, for example, during defecation or some severe muscular effort, then this type becomes thrombotic and is then called a thrombotic hemorrhoid. 3. **Connective Tissue, Dog Ear or Sentinel Hemorrhoids:** This type consists merely in an hypertrophied tag of peri anal skin. It does not contain any varicose veins, and,

strictly speaking, is not a hemorrhoid. 4. **Inflammatory Hemorrhoids:** May be any type of hemorrhoids which has become infected.

Internal Hemorrhoids: Each internal hemorrhoid consists of an elongated pear-shaped swelling covered with mucous membrane, enclosing a central arterial twig surrounded by a bunch of varicose and sacculated veins. There may be only one hemorrhoid present, which is most frequently in the anterior quadrant of the rectum, or there may be several scattered around the bowel.

Clinically, three degrees or stages may be recognized. 1. **First Degree:** In this stage the veins are varicosed, but do not form very distinct masses, therefore remain inside the canal and do not protrude during defecation or straining. 2. **Second Degree:** The veins are dilated and sacculated, forming fleshy swellings, which protrude during defecation, but return spontaneously during the act and can be returned by the patient. 3. **Third Degree:** In this degree the hemorrhoid remains protruding and can only be returned with much difficulty, if at all, and are frequently complicated with a prolapse of mucous membrane.

I shall confine my further discussion to the injection method of treatment in internal hemorrhoids. As the veins are varicosed, but do not form very distinct masses and do not protrude during defecation in internal hemorrhoids of the first degree, this method of treatment is not applicable to this degree. Therefore, we will only consider internal hemorrhoids of second and third degree.

The injection of hemorrhoids is a method of treatment of considerable practical importance of which little is written in the way of advocacy. During 1917 and 1918 I used this method extensively with very gratifying results in the treatment of internal hemorrhoids of second and third degrees in allied soldiers suffering from neurasthenia, shell shock, etc., and since then in my private practice where a general anesthetic was to be discouraged and a local anesthetic unsatisfactory.

History of Injection Treatment.

According to Collier F. Martin, a man named Mitchell, of Clinton, Illinois, originated this treatment in 1871.

A. L. Sherman gives credit to the same man, Mitchell, placing the date about 1877.

Morley claims that the treatment of hemorrhoids by injection was first brought to the notice of surgeons in England by Swinford Edwards in 1888.

This method has received much criticism, the one chief reason being that it was sold as a secret by Mitchell without regard to ability, to anyone who could pay the price demanded. To preserve this secrecy the treatment was often given unscientifically.

The theory of the injection treatment is the same as that for treating naevi, that is, to produce by irritation sufficient fibrosis to obliterate the network of dilated blood vessels forming the hemorrhoids, causing them to shrink and not sufficient to cause a sloughing of the tissue.

Solution: The solution used is composed of 95% carbolic acid one part, glycerine three parts, water four parts, or about twelve and one-half per cent carbolic solution. The following method is used by the author: Patient sits on stool for ten minutes and strains down as he would to evacuate the bowels. He, or she, is then placed on table in the Sim's position. The upper buttock is raised to expose the anus. By straining down again the hemorrhoids will usually protrude and can be easily injected. Sometimes a rectal speculum is necessary to expose the hemorrhoids. Two to six drops, according to the size of the hemorrhoid, should be injected to the center of each tumor with a hypodermic syringe, using a sharp 24-gauge needle. Not more than two tumors should be injected at one time. One week should elapse before other tumors are injected. Occasionally it is necessary to inject a hemorrhoid the second time, but never under three to six weeks.

This treatment causes little pain, but is

followed by considerable swelling of the injected hemorrhoid. When the hemorrhoid is not very large, the patient may go about his work next day. But usually it is necessary to remain in bed for one to three days after treatment.

Contraindications: Injection method should not be used in 1. External hemorrhoids or any structure covered by true skin. 2. Rectal ulcer. 3. Rectal fistula. 4. Strangulated irreducible hemorrhoids with marked prolapse of mucous membrane of rectum or sloughing of hemorrhoids. 5. Active inflammation. 6. Marked hypertrophy of sphincter.

Results: Eugene F. Hoyt, who for 26 years of exclusive practice in this specialty, states that he has used this treatment many thousand times, using a 10 per cent carbolic solution, and is still satisfied with the results.

Mayson states that some of his patients have been under observation for eight years, and in none has there been a recurrence of the condition.

A. B. Cook strongly argues against the injection method, but quotes Andrews, who collected more than 3,000 cases so treated. Failure to cure was noted in 19 cases.

Sherman states that the results have been very gratifying when used by efficient men who understand the limitations of the method.

Goodheart states that he has never had a failure to cure, though admits that there are cases unsuitable for this treatment.

Doyle writes: "In spite of all that has been written of the evil results of such practices, I am grieved to say that it still finds advocates among men whose medical education should be a guarantee of intelligence."

Ivory Back states that this method of treatment is tedious, and a cure is by no means certain. He believes that the majority of cases recur in every two to four years. This is about the maximum strength of argument against this treatment in selected cases, that is what some-

one states or believes or report of some one isolated case. I do not conceive how any doctor with sufficient medical knowledge to examine his patient to determine the type of hemorrhoids present, even though he has never seen or given the treatment, could call it tedious. I want to state that it is not the treatment, but the classification that is tedious.

From a review of the literature on this subject, I have not found anyone who has given this method of treatment in a sufficient number of cases to have an opinion and using less than 25 per cent phenol solution who is not still a strong supporter in certain class of selected cases.

Conclusions.

1. This method of treatment is applicable only in internal hemorrhoids of second and third degrees.

2. This treatment is especially valuable in that large class of patients where a general anesthetic is contraindicated and local anesthetic is unsatisfactory.

3. Results and mortality compare favorably with those obtained by more radical methods.

4. My records do not show a single dissatisfied patient who received this treatment.

DIAGNOSTIC ERRORS IN POSTERIOR URETHRITIS AND PROSTATITIS.

Clarke Quarterman, M. D.
Valdosta, Ga.

Historic records show that gonorrhoea has existed since an exceedingly early date; Moses laid down laws for the Israelites to be governed by, in the management of "running issues," which we now believe to be gonorrhoea. Much confusion existed as to the etiology and nature of this disease; it first it was thought to be a "flow of semen," as a literal translation of the word would indicate; then came its confusion with syphilis, and in settling this question came one of the bitterest fights ever waged in the medical world. To Ricord, the great French physician, is due the credit of showing that gonorrhoea and syphilis

were distinct diseases, but in 1878 the gonococcus was discovered to be without a doubt the true cause of gonorrhoea. This was discovered by Neisser. Gonorrhoea has a great tendency to lie dormant for considerable and variable periods of time, and to occur after sexual or alcoholic excesses.

Within recent time a much better understanding of the etiological role of the gonococcus in producing gynecological diseases has arisen, and we have learned without a doubt that, even when derived from a latent infection in the male, this germ may play havoc with the uterus, tubes, ovaries and viscera, and that the gonococcus is the primary cause of a large percentage of the major operations in the pelvic organs, and is an important factor in producing sterility in men and women. Its invasion of the prostate, seminal vesicles, along with structures which it is the most frequent cause, accounts for the majority of urinary and sexual disorders to which man falls victim.

In the past few years no branch of medicine has made greater progress than the department on genito-urinary diseases. It has been in the last few years that acute and chronic gonorrhoea had been placed upon a scientific and rational basis. This has been accomplished through investigations, whose results have given us a definite knowledge of the micro-organism concerned, many conclusive tests and the pathological changes in urethral tissue which their presence excites.

Posterior urethritis and prostatitis with their relation to sexual neurasthenia and the ever-present danger of lurking infection has been clearly demonstrated.

It has been only a short time since the endoscope came to be of practical use, and out of its development grew the various tests and instruments that made diagnostic errors much less frequent, but even now they occur every day, which are very annoying to our patients, and humiliating to us. (Ballenger and Elder.)

If you will bear with me, I will endeavor to mention a few points that may be of diagnostic aid in genito-urinary diseases.

I will not dwell long on anterior urethritis, as I am quite sure you are all familiar with these symptoms, but wish to mention a few, as anterior and posterior urethritis are almost inseparable.

After an incubation period of from three to twelve days, you are greeted with a stinging sensation in urethra, burning during or after urination, redness at meatus, swelling, pain and a weeping penis after sad realization of existing condition.

The discharge is at first scant and mucoid, and then a little more free and muco-purulent, and still more free and purulent. Sometimes it may be tinged with blood or have a greenish-yellow color. The symptoms increase in severity until the seventh or eighth day, and then continue in the so-called stationary period for another week, and then begins to decline, and is usually well in from four to six weeks (unless you have a posterior urethritis).

After all symptoms have disappeared the patient should refrain from excesses of any kind for at least a month, and urine should be examined from time to time until all cloudiness and shreds have disappeared, and gonococci cannot be detected microscopically, for the extension of this inflammation through the shut-off muscle into the deep urethra is often the beginning of puzzling and serious trouble, and, unfortunately, this occurs in 80% of all cases of gonorrhoeal origin.

How are we to know if we have post-urethritis to deal with? Involvement of the posterior urethra may occur without symptoms to suggest inflammation of this part of the canal, but if you make a two-glass test, after irrigating the anterior urethra with a normal salt solution, the first glass will be cloudy, second glass clear (if the bladder is not involved). If the urine has not been voided for some time the pus from the posterior urethra will run back into the bladder and give you cloudiness in second glass. If posterior urethra and bladder are both involved you get cloudiness in both glasses. The pros-

tate and seminal vesicles may become infected without being suspected until the persistency of the discharge, pus and shreds or recurrences lead to a more thorough examination.

This form of posterior urethritis is of more common occurrence, but it less frequently diagnoses than is the more severe form with cloudiness in second glass, frequent and urgent desire to urinate, painful urination, especially at the end of the act and afterwards. Sometimes the bladder may feel as though it had not been emptied, and the last few drops may contain a little blood squeezed from the deep urethra. It is common to have backache, pain in abdomen and legs and weighty feeling in pelvis. The misleading part in several cases is that you have little or no discharge at the meatus, but after you have discharged the patient for well, the symptoms reoccur after the involvement of the prostate or seminal vesicles. Pus secreted behind the shut-off muscle does not usually appear as a discharge, but is seen in the urine, more cloudiness being in the first glass than in the second and third (in three-glass tests), for the first has the washings of the urethra in addition to the pus which has passed into the bladder.

Pus in third glass after urine has been held for some time, and absent when held for a short time, is indicative of a deep urethritis and eliminates cystitis, because if urine is not voided for some time it allows sufficient time for the posterior urethra to fill up with pus and run back into the bladder, not being able to get by shut-off muscle in front.

Prostitis, seminal vesiculitis and epididymitis are apt to occur when there is inflammation in this part of the urethra on account of the numerous ducts opening into it, but sexual intercourse, sexual excitement, muscular exertion, passage of instruments into urethra, injury to perineum or testicles tend to cause this inflammation.

Under rational treatment the prognosis is good as regards the acute symptoms,

but, on account of the likelihood of involving the prostate, seminal vesicle and bladder, it should always be remembered that it may pursue a prolonged course, with or without acute inflammation of these organs.

How are we to know when the prostate is involved? During a specific urethritis, excesses of any kind followed by increased frequency in urination and perhaps with hematuria with or without pain in this region should always suggest prostatitis. Pain, increased during defecation, and throbbing in character, attended with a feeling of indisposition, chills and fever, increase the likelihood of this condition.

A rectal examination confirms this suspicion when a hard, enlarged and tender mass is felt. Pus in the later stage is seen much more frequent than in the acute stage, and the patient may pass his urine with great difficulty on account of prostatic enlargement. This may lead you to believe he has a stricture.

We can avoid many diagnostic errors in proctitis by tests and not relying entirely on symptoms.

If discharge does not appear at meatus and urine before massage is free from pus, but contains pus after massaging prostate, this is conclusive evidence that the prostate is inflamed. When you massage the prostate care should be taken not to massage the seminal vesicles, as you may get pus from them, and this would be confusing. If there is pus in the urine and you wish to determine if it is from prostate, irrigate urethra and bladder, leaving a few ounces of saline in the bladder, then massage prostate and see if pus and shreds appear in solution left in bladder. If you wish to see if seminal vesicles are involved, massage prostate, strip secretion out of urethra, irrigate as before, leaving a few ounces of saline in bladder, then massage seminal vesicles and examine solution passed from bladder for pus.

There are several substances found in urine and secretions from the prostate, but I shall call your attention to only the most important ones, viz.: Proteid and

albumose. You can determine if proteid is present by massaging the prostate, adding secretion or urine containing secretions to a mixture containing one part nitric acid and nine parts magnesia sulphate sat. sol. Add specimen as for Hellers test if proteid is present you will get a white precipitate. Always examine urine for albumin before making this test, and in case you have nephritis and get a similar precipitate you can differentiate the albumin from the proteid by irrigating urethra and bladder, leaving a few ounces of saline in the bladder, then massage and examine specimen passed after massage. This will eliminate albumin found in urine.

You can detect albumose by adding nitric acid to specimen; if albumin is present in urine, heat specimen; albumose will not precipitate in hot solution, but albumin will.

When we massage the prostate and examine the secretion microscopically, we find mucus, epithelial cells, phosphates, spermatozoa, amyloid and lecithin bodies, and always find pus in prostatitis, gonococci may or may not be found, depending upon the number in secretion and how long prostate has been infected, as gonococci is rarely demonstrated after third or fourth year.

Case Reports.

Mr. R. R. came to my office with an acute anterior urethritis of gonorrhoeal origin. I gave him an injection of argyrol to be used with small syringe. Later I prescribed astringents as lead acetate, zinc sulphate, hydrastis, etc. For internal treatment I prescribed iithiated zeau, urotropin, etc. After this treatment, consisting of five or six weeks, all discharge disappeared and patient was discharged as well.

In August, 1915, I was called to see this patient at his home; he was suffering with chills, fever, backache, headache, legache and weighty feeling in pelvis and rectum. He lived ten miles in the country, and no blood examination was made. Can you guess what my diagnosis was? Yes, it was malaria. I used quinine orally with

unsatisfactory results, then I used quinine and urea hydro-chloride hypodermatically with slight reduction of temperature, which soon went up again.

Patient continued to have fever, after he had been treated for several days with practically no results you know what happened. They called in another physician in consultation. He concluded, inasmuch as all the children had been sick with malarial fever, and all symptoms were present, that it was evidently malarial fever, and recommended the use of arsenic in connection with my treatment.

Several days later they decided to discharge us and get a good doctor. He found out how long the patient had had fever, the course and character of the disease in general, treatment prescribed by me, etc. So his diagnosis was typhoid fever. Patient continued to have fever for several weeks. After I had almost forgotten about the case Dr. Little called me over the phone, stating that he had a patient at the hospital for an operation of abscessed kidney, and patient requested my presence during operation.

Operation was performed and a large quantity of pus was drained out of kidney by incision and through urethra. It is very easy now to see what the diagnosis should have been, but it is too late for a correct diagnosis, for Mr. R. R. was railroaded all right. He had an anterior urethritis, then a posterior urethritis, prostatitis, with enlarged prostate pressing on urethra, retention of urine (cystitis following), infection up ureters, infection and abscess of kidney. It seems inexcusable for physicians to make mistakes like this, but they are made every day. Most of the time we never find out our error in diagnosis.

Let us be more careful and when a man comes to us for treatment and complains of backache, heavy feeling in legs, dull, weighty feeling in rectum and pelvis, with or without a discharge at meatus, although he only has one or two of these symptoms, always consider carefully the possibility of a posterior urethritis and

prostatitis regardless of his social standing or history, for these refined gentlemen often contract this disease in a toilet or bathroom, or claim they have never had any venereal disease at all.

REASONS FOR OPERATIONS IN EARLY INFANCY ON CLEFT-LIP AND CLEFT-PALATE.

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Elective surgery, while carrying with it a latitude as to when a given surgical operation should be performed, does not license procrastination to a point where the patient suffers as a result of it. This observation applies especially to Cleft-lip and Cleft-palate. It is surprising that, after Dr. Brophy had nearly forty years ago described his operation on very young infants and the success that followed it (as proven by a number of us who have done hundreds of these operations), there should still exist those who advocate waiting several years prior to taking operative steps.

To my mind there are several reasons for early infancy operations, and not a single reason for delay. The only objection raised to operations on a very young infant is a feeble one. It is claimed that operations on an infant under three months is a severe shock to its "nervous system." How preposterous! How can one shock a nervous system, when in the infant it is as yet not developed? An infant does not have the faculty of attention, memory, fear nor apprehension. In short, why take into account a system that does not exist?

It is noteworthy that infection and shock rarely, if ever, follow circumcisions upon very young infants. This is borne out by the universal practice of early circumcisions among Jews, various states in South America, Central Australians and other people, who hold it as a religious rite. The same good results are to be

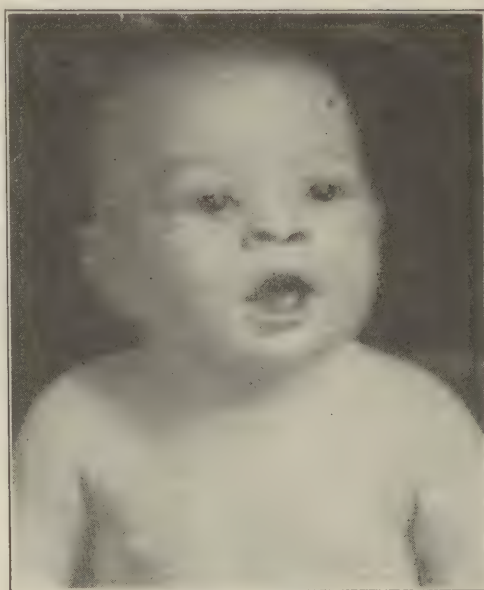


CASE A. FIG. 1.

Note that this six-weeks'-old infant has a rather broad nostril even on the normal side.

noted where this operation is performed in early infancy for medical and not religious reasons.

A priorily, one should realize that the trying ordeal and struggle of being born (especially in forceps deliveries) is far greater than that of an operation on the lip or palate. Having survived this experience the result of the operation is al-



CASE A. FIG. 2.

Result five months after operation.

most certain. It is well, however, at this juncture to call attention to the importance of having a skilled anesthetist administer the ether. Not only is this true of operations on lip and palate, but any operation on or about the mouth. Fortunately in the institutions with which I am connected such as the Medical and Dental Colleges, the Scottish Rite, Wesley Memo-



CASE B. FIG. 1.

Two-months'-old infant with unusually wide cleft.



CASE B. FIG. 2.

Result nine months after operation.



CASE C. FIG. 1.

This hideous appearance could have been spared the victim if early operation had been instituted.



CASE C. FIG. 2.

Another view of same patient.

rial, Grady Hospitals and the Piedmont Sanatorium, etc., the question of efficient anesthetists does not give us any concern, as they are unusually capable. The danger in infant anesthesia is due solely to profound anesthesia. The secret of success lies in light or superficial anesthesia.

As to reasons for operating early let us examine the following: (1) If the operation is done in the first few days or weeks after birth, the infant can begin breast-feeding. (2) The tissues, being semi-embryonic, heal with little or no scarring. (3) The chagrin to parents is not prolonged and embarrassment to patient



CASE C. FIG. 3.

The encrusted blood-cot is still to be seen on lip five days after operation. The appliance shown is to relieve tension on stitches.



CASE C. FIG. 4.

Side view showing the arch formed on Logans Lip Bow.



CASE C. FIG. 5.

This photograph was taken nine weeks after operation.

avoided. (4) Patient is prevented from acquiring a cleft-palate speech. (5) Operative risks are safer in infants than later in life. (6) And finally, but most important of all, when the operation is done under three months of age the jaws being in a pliable state can be moulded with the fingers to the desired shape and wired in place. (See cases A and B.) After that age it is practically impossible to bring the cleft-jaws together and flaps must be resorted to in order to bridge the cleft. The result in the former brings about a normal arch-contour, while the latter is characterized by a flattened appearance of the face. (See cases C and D.) Dr. Brophy asks the following pertinent question: "Should a family with a young infant meet with an automobile accident, the mother and child being thrown out of the car with the result to the child of a complete cleft of the lip and palate, the bones being forced apart, would the surgeon suggest postponing operative procedure for a few weeks, a few months, or a few years? Certainly not. He would immediately employ means to bring the separated bones and lips into normal relation. . . . So, a cleft-palate, not being unlike a wound, calls for measures which have as their

aim the closing of this wound—this fissure."

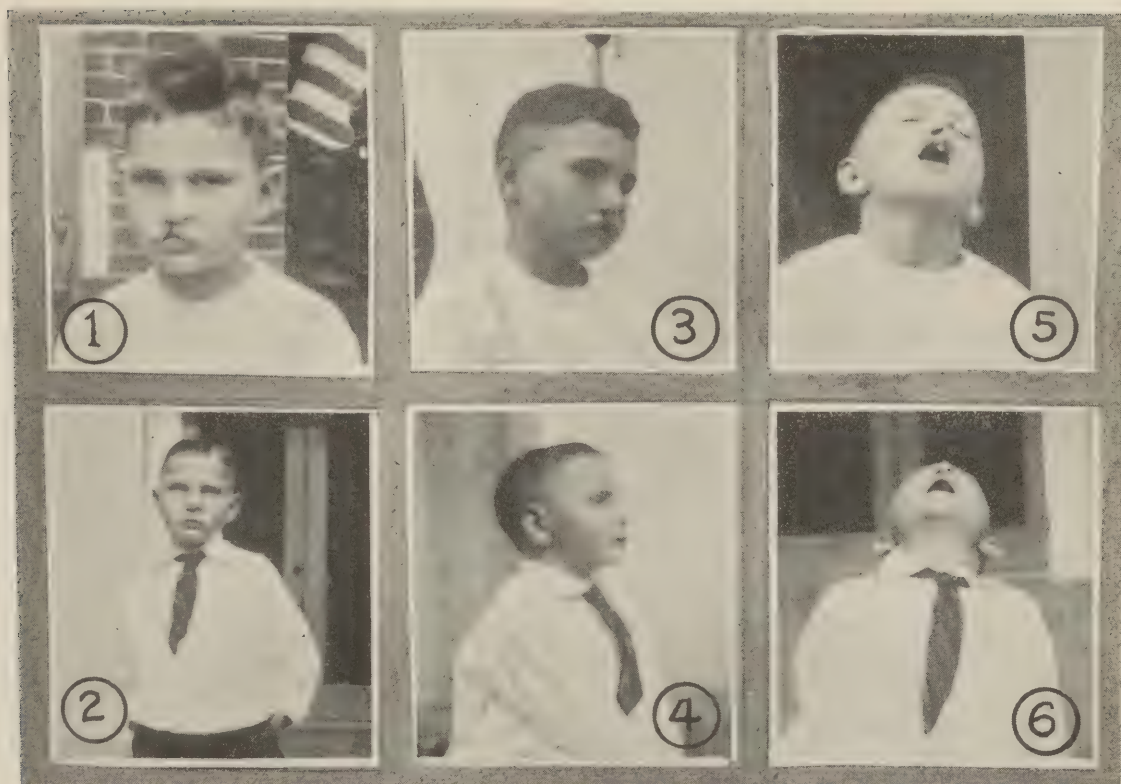
If the above is true, it is then a pity that congenital lip and palate clefts are devoid of hemorrhage. It is obvious that should these unfortunate infants be delivered with blood spurting from the clefts, the sight of this might spur immediate correction of the deformity.

Nausea, a very potent and troublesome factor in adults and children following ether anesthesia, is unheard of in operations on infants. In fact, feeding is started an hour following the operation. The pediatrician has been of wonderful help to us with his formulas, and wherever possible the general condition of the little patient is left entirely to him.

In answer to a questionnaire sent to several leading surgeons and physiologists, asking them if they agreed to operations under three months, Dr. Geo. Crile writes: "I am sure you are right. The neuron arcs are not completed at that time and, in a way, the operation is comparable to one under anoci-association." Dr. Howard Kelly says: "It is better for the child in every way, there is less shock attending the operation."

Let us formulate a simple rule governing the proper time for operating on these unfortunate subjects. Operations for cleft-lip of whatever degree, single or double, should be done during the first few days or weeks of life. The same is true as concerns single or double cleft-palate, when the alveolar ridge is involved. Clefts of the soft palate only, should be operated on between fourteen and eighteen months of age. Prior to fourteen months the soft palate will not stand suturing. After eighteen months we endanger the acquisition of defective speech, easily acquired and most difficult to correct.

It will be argued by those who examine the before and after photographs accompanying this article, that the results on the lips I did after infancy, are about as good as can be expected. To a great extent that is true, but when it comes to the nose and particularly the palate, the result is,



CASE D. FIGS. 1 TO 6.

The transformation, as shown above, is sufficiently obvious and needs no comment.

to say the least, poor and compromising. Especially is this true when we take into consideration that these unfortunates are social outcasts in juvenile and adult society. The peculiar speech—the hideous appearance, prevents them from enjoying the company of their fellow men.

The purpose of this contribution is to impress upon the reader the absolute necessity of early infancy operations. I can not, for lack of space, deal with the surgical technic. However, to those interested, the writer will be pleased to send a reprint covering technic.

An admirable contrivance for relief of tension on sutures is shown in case C. figs. 3 and 4. It is known as Logan's Face Bow and answers the purpose better than anything so far suggested.

Conclusions

(1) Contrary to popular opinion, it is not necessary to wait several months or years to operate on Cleft-lip and Cleft-palate.

(2) Scars entirely or almost entirely fade away in time when operations are done on young infants.

(3) The separated bones of an infant can be moved and moulded to their proper positions, whereas in operations on children and adults flaps must be resorted to resulting in broad and flattened faces.

(4) The habit of Cleft-palate speech, like other habits, is easily acquired but difficult to correct.

(5) Shock is not a factor in infants, but is certainly to be considered when operating on children and adults.

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SITUS VISCERUM TRANSPOSUS OR TRANSPOSITION OF THE VISCERA.*

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Situs Viscerum Transposus is an abnormal situation of the viscera in which they occupy the side of the body opposite to their normal position. The condition is congenital and quite distinct from an acquired mal-position as in a dextra-cardia from thoracic pathology. Transposition may be complete or partial, the complete variety being much more common than the partial; about three hundred reported cases of the one to two or three cases of the other.

It is interesting to note, and a compliment to modern medicine, that the past fifty years have brought into literature more cases of transposition found during life than all the centuries before. In 1865 Gruber (2) reported 79 cases, of which only five or six were discovered during life, whereas in 1902 Arniel (3) reported 46 cases, 40 of which were discovered during life. The explanation is obviously the more detailed routine examinations of the present era, the greater prevalence of surgical procedures, and the more frequent x-ray studies.

Credit for the first reported case goes to Petrus Servius, of Rome, in 1843. Gruber, mentioned above, reported 79 cases in 1865, this covering a period of two centuries, and discusses 46 cases in his report of 1902, and Sheik (4) in a recent article collected 24 cases since 1912.

Theories in explanation of the cause of transposition are as legion as the embryologists themselves, and delve into embryology in its most intricate, and to the physician who is not an expert embryologist, most puzzling form. When I read them I cry like Casca, "He spoke in Greek, and for my own part it was Greek" to me. However, the concensus of opinion seems to lay it to an abnormal habitus with reference to the umbilical vesicle in the em-

bryo, the inversion taking place when the embryo does not turn at the right time from right to left. Dareste (5) is said to have shown that a hen's egg warmed on one side only will hatch in the majority of cases into a chick with transposed viscera.

Gruber made a detailed study of his cases, the results of which I will quote:

Out of the 79 cases, 49 were males, 19 females, 11 sex not known. The length of life differed not from normally arranged persons, nor did the condition have any abnormal effect on child-bearing ability. Transposition of both thoracic and abdominal organs occurred in 71 cases, in the abdomen alone in 8. In 35 the right lung had two lobes, the left three; in two cases the lungs were not transposed, and in one both had two lobes. The position of the testicle was mentioned seven times, in four the right was lower, in one the left. Position of the kidneys was mentioned nine times, left being lower in seven and the right in two. In 32 cases mentioning the aortic arch the vessels arising therefrom were transposed 30 times.

The reports of our own two cases are as follows: Case 40 B. B.—Colored man, age 19 years. Family and past medical history of no importance. Brought to St. Mary's Hospital by attending physician as an emergency case of appendicitis, on July 4th, with history of pain in right iliac region for one week, becoming worse to present time. Hurried examination showed tenderness of the entire lower abdomen seemingly equal on the two sides, with slight rigidity over both lower quadrants. Temperature 99 degrees, pulse 118. Attending physician stated that he had examined the patient and found lungs and heart normal and in good condition. Patient immediately placed on table and a right rectus incision by Dr. Fullilove opened the abdomen. The appendix was not located in the usual place, so the illium was followed down to the caecum, which was found on the left side. The usual appendectomy was then completed. Exploration found the liver on the left side also, the right kidney was lower than normal.

* From the Clinic of Drs. Fullilove and Stewart, Athens, Ga. Read at Eighth District Medical Society of Georgia, Hartwell, Ga., Aug. 9th, 1922.

The recovery was uneventful. Physical examination after operation found the apex beat heard and felt best in fourth space inside the mid-clavicular line. The apex beat could be heard in the normal apex area, but sounds were not so loud and rather distant. Liver dullness absent on right, but present on left side in usual limits. Spleen not palpable. Patient was right-handed. The left testicle was lowest. Position of left kidney was not determined. X-ray picture with bismuth corroborated the physical findings of thoracic transposition. The bismuth enema was seen to enter the descending colon on the right side, travel up and across to reach the ascending colon and caecum on the left side. The stomach was exactly transposed.

Case 60—J. S. Male, white, age 58 years. Applied to clinic with poison ivy. Married; five children, none of whom has transposition. No history of transposition in family. This patient has known all his life that his heart was on the wrong or rather the right side. Physical examination reveals the apex beat in fifth interspace outside the midclavicular line. The apex beat is diffuse and the sounds not well heard. The patient weighs 180 pounds, with heavy, fleshy chest. Liver dullness on left side. X-ray study showed a complete transposition as in the case above. Dr. F. K. Boland, of Atlanta, operated this case some years ago. His report follows: "Past history negative except for glycosuria six years ago. Present illness: taken suddenly today, June 30, 1916, with acute, violent, abdominal pain, which two hours later radiated down to left iliac region. Enema given in office by Dr. J. W. Roberts, with good results, but pain continued; no nausea. Physical examination: well-developed man, lungs negative, apex heart in right fifth interspace, liver dullness on left side. Tender abdomen, somewhat rigid left rectus muscle. Temp. 100, pulse 112; B. P. 205-155; leucocyte count 12,000. Urine negative. Arteries under considerable tension. Moved to Davis-Fischer Sanatorium same day and operated

upon by F. K. Boland, assisted by Dr. E. C. Davis. Diagnosis acute appendicitis, left side, with transposition of viscera. Incision outside left rectus, caecum and ascending colon found here. Appendix very thick, 20 c. in length, acutely inflamed, no suppuration, no gangrene. Appendix removed, stump inverted, wound closed without drainage. Patient made usual recovery."

The patient is right-handed when only one hand is used, as in writing. When both hands are required, as in chopping wood or playing golf, he is left-handed. The left testicle is lowest. Position of kidneys not determined.

During my brief medical experience I have seen three cases of complete transposition of the viscera—the present two and one at autopsy at the University Hospital, Augusta. The condition is not so rare that the practitioner can ignore it. Indeed, he should be ever on his guard to detect it. Acute pain in the left iliac region cannot off-handedly be called kidney or urethral stone. How easily one could let such a case go on to a rupture of a left-sided appendix. The latter of our cases has been diagnosed on several occasions prior to his operation, when in similar attacks, "congestion left diaphragm." An increased area of dullness in the normal splenic area has been diagnosed spleen of gigantic size, when liver dullness from transposition was later found to be the cause. In both of our cases the heart sounds were quite audible over the normal cardiac area, and in the latter case, the man weighing 180 pounds, just about as loud as one might expect to find in a man of such build. Both of these cases have been previously examined and the condition not discovered, one by his family physician and the other by an examining physician in the home office of one of our large insurance companies in New York.

Rosenbach (5) states that these patients are always right-handed. Our findings do not agree with this statement. The position of the testicles is not diagnostic.

Careful examination of both sides of the chest with percussion of the liver area of dullness as a routine by the practitioner will bring to light many hitherto undiscovered cases of transposition.

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MANIPULATION OF STIFF JOINTS.*

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Stiff joints frequently follow injuries, especially fractures which have been treated by prolonged immobilization in plaster casts, also infection in and about the joints. These patients often suffer both pain and disability. They are very desirous of getting relief, and when the surgeons fail, then try various cults and irregular practitioners to get relief. A number of so-called "bone setters," both in this country and in England, have established a reputation and have a large clientele because they have given relief to some of these sufferers. Some of these "bone setters" have had a large experience, they have learned to select their cases, they advertise their good results and they say nothing of their failures. So rather than condemn the "bone setters," let us examine our own cases more carefully and see if we cannot get better results, then there will be fewer cases to wander away from us.

Sir Robert Jones, in his recent most excellent work on the "Orthopaedic Treatment of Injuries," gives the following rules for breaking down adhesions in and about joints:

1. Before breaking down adhesions, exclude the presence of an active arthritis. (If the motions of a joint are painful in all directions, this means an active arthritis. If there is freedom of motion in one

or more directions, this means the lesion is not an active arthritis.)

2. Following traumatic arthritis, proceed slowly; if inflammatory reaction supervenes, the manipulation should not be repeated.

3. Joints should not be manipulated following septic conditions within or immediately without the joint.

4. Adhesions are best broken down under complete anaesthesia, and the joint put thru its complete range of motion.

5. Sudden jerking movements should be avoided as they are, (a) inefficient, (b) cause unnecessary trauma, and (c) may break the bone instead of the adhesions. Do not use "pump-handle" methods, but put the joint thru all its motions once only.

Fibrous adhesions, on passive motion, convey a sensation to the hands of the surgeon which differs from muscular resistance on the one hand, and from bony blocking on the other. The cessation of movement is definite and unmistakable, but not associated with pain unless force is used. When these adhesions are broken under an anaesthetic there is a distinct "popping" as if a string were broken. This differs from the grating or tearing sensation one gets when an arthritic joint is manipulated. The x-ray should always be used before manipulating a joint to rule out bone blocking or bone disease. If there has been a complete destruction of joint cartilages, manipulation will not succeed. Cases showing evidence of myositis ossificans should not be manipulated as more bone will probably be produced.

Certain cases of joint stiffness will improve or recover without manipulation, for example: a young joint recovers motion more easily than an old one. Prolonged immobilization of a joint in young people produces stiffness from which they will recover by voluntary effort and physiotherapy, while in older persons the stiffness is more serious. A joint in which the stiffness is gradually disappearing may be safely left alone. The increase in the range of motion must be in all direc-

* Read before the Faculty of Emory University, School of Medicine.

tions (e. g. the elbow must not only increase in flexion and extension, but also, in supination and pronation.) If the increase in range of motion in any one or all directions ceases, intervention is called for.

Since the manipulation is similar for all joints with the possible exception of the fingers, Sir Robert Jones describes the method used in two joints only. First the shoulder: Compare the range of motion of the two arms as considerable individual variations exist. The chief dangers are, (a) Fracture of the neck of the humerus, especially in older patients, or if the arm has recently been immobilized. (b) Dislocation of the shoulder joint. (An assistant should fix the scapula on the chest and keep a fist in the axilla to prevent downward dislocation of the head of the humerus.) Patient lying on the back with damaged shoulder over the edge of the table. Complete anaesthesia. Slowly abduct the arm to its normal range. Flex the elbow to a right angle and rotate arm inward and outward. Place hand behind the head and press elbow down below the level of the table. Circumduct the arm in gradually increasing circles. Scapula is now released and put thru its normal sliding motions on the chest in order to break up any adhesions which may have formed about it. Arm is placed in an abduction splint and kept up until patient can voluntarily perform his exercises. Once daily, commencing the next day after the manipulation, the arm is put thru all its motions only once by the surgeon or nurse, until the patient can perform these motions voluntarily. This causes considerable pain, of course, but is relieved by heat and gentle massage.

The manipulation of the knee is performed as follows: If there has been a fracture of the femur it should be protected by anterior and posterior splints, even tho the union seems perfectly firm. Complete anaesthesia. Patient preferably lying on his face, knee is flexed to full extent, care being taken not to fracture patella or femur. Knee at right angles, ro-

tate foot inward and outward. (This often breaks up adhesions within the joint and about the semilunar cartilage.) Extend the knee to full extent, care being taken not to displace the tibia backward on the femur when the ham string tendons are tight. A thick pad of cotton bandage about the knee joint will help limit the effusion into the joint. If the knee has been fixed in extension, it is well to apply a splint in flexion, as the psychological effect of seeing the knee flexed upon coming out of the anaesthetic is good for the patient. If the knee has been fixed in flexion, a posterior splint is applied with the knee extended. Put the knee thru its motions once daily in spite of the pain until the patient can do so voluntarily. Physiotherapy, especially heat, dry or moist, and gentle massage, are used to relieve pain. Electricity is often of value to restore power in the quadriceps extensor and the vasti muscles.

Guides in after treatment: (a) If pain after movements is of short duration, they may be safely continued. (b) If pain persists for lengthy periods after movements, rest is indicated. (c) If increased range of motions is maintained, movements may be safely continued. (d) If the range of motion is continually diminishing in spite of movements, rest is indicated. (e) Duration of pain, rather than its intensity, should be our clinical guide. (f) Unlimited voluntary movements may be safely allowed, for they are not followed by obstructive reaction. In other words, a patient will not voluntarily hurt himself.

Conclusions: Properly selected cases, properly manipulated and carefully treated afterwards, often yield brilliant results. Improperly selected cases, improperly manipulated, or poorly cared for afterwards, may give lamentable and sometimes disastrous results.

HUSH MONEY.

"Now, Willie, said the teacher, "you may tell us what 'hush money' is."

"It's the money what pa gives ma to buy paregoric for the baby."

REPORT OF AN UNUSUAL CASE OF URETERAL ANOMALY.

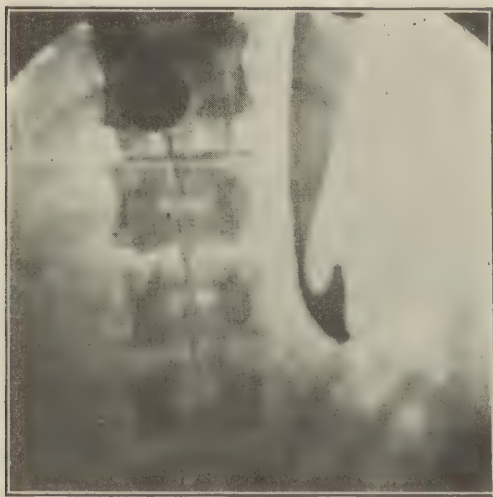
Charles H. Watt, M. D., F. A. C. S.

Thomasville, Ga.

Since the advent of the catheterizing cystoscope we have learned that ureteral anomalies are far more common than was formerly believed. In fact, I may say they are so common that one is not justified in demanding space in the already overburdened medical periodicals for reporting these cases unless they present some unusual feature. These cases are always of the greatest interest to the surgeon in charge of the case, but in order to elicit interest from the profession at large they must possess something more than the usual abnormalities. The writer feels that the case reported below fulfills this requirement and should be put on record.

This case occurred on the service of Dr. William H. Doughty, Jr., at the University Hospital, Augusta, Ga., and I am indebted to him for the privilege of studying and reporting it.

Case Report—S. W., negro; male, age 19; entered the University Hospital, Augusta, Ga., February 23d, 1919, with the diagnosis of left inguinal hernia. He was examined by Dr. Doughty, who concurred in this diagnosis.



Pyelogram showing sinus filled with thorium.

The hospital records at this time were very incomplete, due to immediate post-

war conditions, when internes and assistants were scarce, so that the information obtained from the record of the first admission is of little help. According to Dr. Doughty, he did not for a moment question the correctness of the diagnosis until the sac was opened at operation February 26th, 1919, at which time there was a gush of clear, straw-colored fluid similar to that found in hydrocele. Examination, however, revealed the fact that it was not a hydrocele. The sac was entirely extra-peritoneal, was tubular in shape, admitting two fingers readily, running upward and backward toward the left kidney. It had no evident connection with the bladder. The spermatic cord lay somewhat mesial and posterior to this sac, and appeared normal in every respect. No true hernial sac could be found.

The operation was continued by attempting to dissect free the lower end of this sac, which was done without great difficulty, but as it was being pulled upward there was seen attached to its posterior wall, but entirely outside, a small, tubular structure the size of a lead pencil, closely resembling a normal ureter with one exception, it could not be made to function. With the discovery of this additional complication the operator decided to conclude the operation, which was done by suturing a half-inch rubber tube in the neck of the sac and a small rubber catheter in the tubular structure, which will be referred to as the ureter for the sake of identification. The wound was then closed around these and dressings applied.

Following the operation fluid constantly drained from the larger tube, but none from the catheter. This fluid was examined by Dr. Sydenstricker and the following report made: "Pale yellow, cloudy, sp. gr. 1014, urea and a large amount of chlorides present. Phenyl-sulphothalein present in very small amount in 15 minutes after intra-muscular injection. Fluid undoubtedly urine."

The patient was discharged from the hospital May 5th, with wound healed except for small sinus through which fluid constantly drained.

On July 11th, 1919, this patient was readmitted and was referred to me by Dr. Doughty for study.

The patient stated that he returned because of the annoyance and embarrassment incident to the constant wetting of his clothes by the drainage.

Personal History. This was obtained at the second admission, and contains very little of interest. He does not recall a swelling in the inguinal region as a boy, only within the past few years has he noticed it. He has noticed, however, that it was growing gradually larger, although it seems at times to vary in size. There was never any pain associated with the swelling, but its presence "bothered him."

Denies venereal infection as well as urinary troubles.

Physical Examination. This reveals a well-developed, muscular, young negro man normal in every respect except for the sinus in the left inguinal region. This sinus is about 1 mm. in diameter situated in the center of a well-healed linear scar. The pad worn over this sinus was saturated by the discharge, but lacked the urinary odor.

For reasons given above, the data regarding the surgical condition prior to operation is lacking. It can only be said, as was done above, that the condition so closely resembled an inguinal hernia that Dr. Doughty did not for one moment question the correctness of the provisional diagnosis.

Cystoscopic Examination. July 14th, 1919. At this time I made the following note: Cystoscope introduced without difficulty; urine from bladder slightly turbid; bladder capacity normal. Careful inspection of interior of bladder reveals no pathology. Right ureteral orifice located without difficulty, normal in appearance and location; No. 7 ureteral catheter easily inserted to kidney pelvis. A careful and prolonged search for the left orifice was unsuccessful, though this angle of the trigone appeared otherwise perfectly normal. The cystoscope was then removed, leaving the catheter in the right ureter.

Next an x-ray catheter was inserted in the sinus on the abdomen. This passed upward for a distance of 25 cm., at which point it met with an obstruction. Within a few moments a small amount of thin cloudy fluid escaped through this catheter. The patient was then given 1 c. c. of phenolsulphonethalein intravenously, with the following results:

Left, or sinus.	Right.
Appearance time...	15 minutes. 3 min.
Total for 1/2 hour..	Trace. 40%

The catheter was then removed from the right ureter, bladder catheterized, but no urine obtained. The catheter in the sinus was then injected with 20 c. c. of a strong solution of methylene blue in order to determine if there was any connection between this sinus and the bladder. (Forty-eight hours later none had appeared in the bladder urine.)

The patient was next put on the x-ray table and the sinus filled with 15% solution of thorium. This required 32 c. c. The result of the injection is shown in the accompanying pyelogram which is here shown in a retouched positive in order to bring out what was a rather poor negative.

On July 21st a second operation was done for the purpose of isolating the sac and ureter, believing that this would furnish us means of obtaining more complete information concerning the true condition. This was done with great difficulty because of the dense scar tissue. The relation of the sac to the spermatic cord was again noted and was found to be as already described. A No. 6 ureteral catheter was inserted in the ureter and passed upward a distance of 25 cm., where it stopped. It will be noted that this distance corresponds to the distance traveled by the catheter when introduced in the sinus before operation; we know this latter catheter was in the sac and not the ureter, therefore the sac and ureter must terminate at the same level. No fluid escaped from this catheter while in the ureter. Unfortunately we removed this catheter and replaced it by a small rubber one,

which was sutured in place. Again a large rubber tube was sutured in the neck of the sac and the wound closed around these tubes.

The day following this operation a 25% solution of sodium bromide was injected first in the catheter and radiographs made, but repeated attempts failed to give the slightest shadow. It was then we regretted our substitution at operation. Attempts to reintroduce the x-ray catheter through the rubber catheter only succeeded in dislodging the latter. Blindly continuing the attempt to catheterize the ureter the catheter suddenly disappeared in a downward direction, at the same time the patient complained of a sudden and increasing desire to void. Radiograph showed the catheter curled up in the bladder. I was anxious to cystoscope the patient again with this catheter in the bladder in order to locate the left ureteral orifice, but the patient objected, and as it was not essential to do so I did not insist. Injection of the sac through the larger tube gave exactly the same picture as before operation. (See accompanying radiograph.) This completed the investigations.

Subsequent Course. Following the completion of these examinations nephrectomy was advised, but the patient refused to have this done at this time, because of the very hot weather, but promised to return in the fall. A recent letter from Dr. Doughty states that he has heard nothing more from this case.

Deductions. From the data at hand, I feel that we are justified in drawing the following conclusions: 1. That this sac is unquestionably connected with the left kidney. 2. That this kidney is not only useless, but is a menace to the patient. 3. That the "ureter" as well as the sac is connected with the left kidney, as shown by the passage of the catheters. 4. That there was communication between this sac and the bladder prior to the first operation, because the fluid excreted by the left kidney was being drained off, although some remained always in the sac.

This opening was evidently found by the catheter in the wound at the last examination. 5. That this anomaly is congenital in origin despite the negative history. 6. That we are dealing with a double ureter, one functionless, the other greatly dilated as a result of partial obstruction. It must be admitted, however, in view of this theory, that it is difficult to explain why there is no hydronephrosis.

Retrospect. In handling this case I feel that we made two definite mistakes. The first mistake was the second operation. In view of the subsequent findings, after which nephrectomy was advised, it seems that we had sufficient data at the time of that operation to condemn the left kidney. Had we done a nephrectomy at that time this man would no doubt be perfectly well today and we would know the details of this interesting condition about which there is considerable speculation at present. The second mistake, noted above, was the removal of the x-ray catheter from the ureter at the second operation. Its presence may have shed some light.

Conclusion. In conclusion, I should like to offer an apology for reporting a case which lacks completeness; but, in view of the fact that I see no chance of ever completing this record, and since the data at hand is sufficient to make this case one of unusual interest, I felt justified in putting it on record.

The records contain a number of inguinal, also femoral, hernia in which a prolapsed ureter was found in the sac, but I have been unable to find anywhere the record of one similar to the case reported above.

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WANTED

A Pediatrician, Eye, Ear, Nose and Throat, and Internist who might be interested in becoming members of a clinic. Write Journal XX.

THE TECHNIC OF NON-SURGICAL DRAINAGE OF THE GALL-BLADDER.

George M. Niles, M. D.

Atlanta, Ga.

"To the Editor,
Journal, Medical Association of Georgia.
"Dear Doctor:

"I would appreciate it if you would have published in your columns a description of the technic of non-surgical gall-bladder drainage. This would also probably be of interest to many of your readers.

"Very truly yours,
_____"

In response to this request, it has been suggested that the writer furnish a brief and succinct description of the procedure known as duodenobiliary drainage, or non-surgical biliary tract drainage in gall-bladder and duct disease.

To refresh the memories of the readers, let it be recalled that the fundamental facts of this method sprang from the discovery of the late Samuel J. Meltzer, of the Rockefeller Institute, of the fact that a solution of magnesium sulphate, when injected locally into the duodenum would relax the tonus of the duodenum, the sphincter (Oddi's muscle), and the common bile duct, and with this relaxation the gall-bladder would expell its fluid contents, partially or wholly, into the duodenum. In previous papers the writer has pointed out the usual sequence of bile flowing from the various components of the biliary system; the method adopted for the recovery of this fluid for examination; and the clinical possibilities opened up by the line of treatment.

Regardless of the attitude, skeptical in some quarters, cynical in others, the writer wishes to re-affirm that it is possible by this non-surgical method to drain the gall-bladder and bile ducts of their fluid contents within certain limits.

The employment of this procedure over twelve hundred times has enabled the writer to develop a technic, some of it original, and some of it adapted from the

suggestions of other workers in this field—a technic which will recover the static bile when it is clinically possible.

For the sake of brevity this is denominated duodenal tapping, and both for diagnostic and therapeutic purposes the method followed, with certain modifications adopted from time to time, is as follows: The patient comes (best early in the morning hours), with the stomach absolutely empty of food. To those to whom the absence of tea or coffee might mean a headache, a cup of black coffee, or tea, sweetened if desired, may be allowed. The mouth may be rinsed out with warm water, or a solution of potassium permanganate, and a sterile duodenal tube, fitted with a metal tip of fairly good size and appreciable weight, is passed into the stomach. At present the Lyon tube is used, being more satisfactory than any other on the market. A duodenal tube with a stylet is unnecessary. After introducing the tube about twenty-four or twenty-six inches, the patient should lie on the right side, and be made comfortable, for the seance generally lasts two or three hours. While waiting for the tube to enter the duodenum, warm water is frequently injected into the stomach, for the double purpose of washing out that viscus and stimulating peristaltic action. The tube generally passes into the duodenum in from 15 minutes to an hour, though occasionally it requires more time. In exceptional cases it may enter the duodenum in eight or ten minutes. The fluid running from, or being ejected from the tube while it is in the stomach shows but little viscosity, and is acid in reaction, except when from an achylic stomach. When the tube enters the duodenum, this fluid assumes a decidedly viscid appearance, and is either neutral or alkaline in reaction. In a few instances yellow bile has flowed out before any magnesium sulphate was injected, but usually none appears until the solution of this salt is applied to the duodenal mucosa. Difficulty is occasionally encountered in entering the duodenum, because of vagotonic states, or pylorospasms

from such causes as reflex from duodenal ulcer, cholecystitis, or chronic appendicitis. This can generally be overcome by the injection of atropin sulphate, or the previous use of liberal doses of benzyl benzoate. A definite and material stenosis of the pylorus would naturally prevent the entrance of the tube into the duodenum, though, fortunately, this is seldom met with.

Once sure that the tube has made an entrance into the duodenum, a small amount of warm water is injected from a fifty c. c. syringe, so as to balloon out the duodenal wall from the metal tip of the tube, thereby preventing possible traumatism. The tube may then be connected to the first sterile aspirating bottle, and the drainage proper is ready to begin.

In the fasting duodenal state, under physiological conditions, the sphincter of the common duct should be closed, and the duodenal contents should be free from bile, with a grayish tinge, nearly transparent, quite viscid, and showing a small amount of flocculent sediment. In the presence of duodenitis, this sediment is greatly increased. When much bile flows before the magnesium sulphate solution is injected, we may assume the presence of some pathology of group organs physiologically related to that intestinal zone.

There is now introduced by means of a sterile fifty c. c. syringe, fifty c. c. of twenty-five per cent or thirty-three per cent solution of magnesium sulphate, at about the body temperature, or a little warmer. The twenty-five per cent solution is the one of general choice, though in cases where the response is unsatisfactory, or in an individual whose bowels are hard to move, the stronger solution is indicated. Gentle aspiration is now begun, and usually within ten minutes the bile begins to flow, staining a light yellow the solution still in the duodenum. When the color of the fluid deepens, the first bottle is detached, and the second bottle brought into use. Gentle aspiration is continued, and it is generally deemed advisable, and necessary, to make two or three injections

of the solution before satisfactory and adequate results are attained.

Observation shows that the bile flows intermittently, especially after the bile in the ducts and gall-bladder has been drained, and the bile is being collected as it is secreted from the liver capillaries. It would appear that the first bile obtained is that present in the ducts—probably the common duct—and is generally about ten to twenty c. c. The next, and much darker, bile, more viscid and turbid, may reasonably be assumed as coming from the gall-bladder itself. However, when the color of the bile begins to again become lighter another bottle is connected, and the bile then obtained probably comes directly from the liver, mixed with the duodenal secretion. This liver bile may be recovered indefinitely, so when the last light transition in color appears, the tap may be concluded.

The last part of the procedure consists of douching the duodenum with a rather weak solution of potassium permanganate, boric acid, or liquor alkalinus antisepticus. (N. F.)

In most instances the tap proceeds in an orderly and satisfactory manner, but with some patients it has not been so easy. Sometimes the tube is stopped up with mucous plugs, and it may be necessary to frequently inject small amounts of warm water and then aspirate energetically so as to keep up the flow. Patience and perseverance are cardinal virtues in the application of this procedure, for undue hurry and impatience may mar an otherwise favorable outcome.

Some of the limitations are such cases in which the cystic duct is obstructed, though this may depend somewhat on the nature of the obstruction and the relative tonicity remaining in the gall-bladder. It is hardly possible to empty the gall-bladder when the duodenum is mechanically obstructed by inflammatory adhesions, in states of hydrops, or by swelling of the mucous glands at the neck of the gall-bladder, nor when a mass of calculi fills the entire lumen of the sac. To

make rash and unwarranted promises concerning this method is not only liable to bring disappointment to hopeful patients, but will also bring the whole procedure into disrepute.

The application of this method in its entirety is not disagreeable, and none of the nearly four hundred patients observed by the writer have suffered any ill effects, either present or subsequent; and other than a rather free hydragogue catharsis, no untoward symptoms have supervened.

In conclusion it is claimed that this method constitutes an aid to diagnosis, supplementing the usual clinical and roentgenologic efforts; as an alternative means of treatment when surgery is either not indicated, or is not in immediate need; as a supplementary method of post-operatively continuing surgical principles of drainage in those cases incompletely cured by surgical methods alone; and, finally, in that large number of indeterminate "bilious" cases, where ordinary therapeutic measures have been without avail.

THE INTRACUTANEOUS METHOD OF DIAGNOSIS IN ASTHMA AND HAY FEVER.*

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Atlanta, Ga.

The subject of asthma and hay fever is too large to permit a complete discussion in such a paper. It is desired at present to discuss only the means of diagnosis, with especial reference to the practical application of the intracutaneous method. Of the known allergic phenomena, asthma and hay fever occur most frequently and cause the most distress. For this reason, progress in the study of these diseases has far surpassed that of the remaining allergic manifestations.

The real study of hay fever, or allergic coryza, from the standpoint of proteid sensitization, began in 1906, following the suggestion of Wolf-Eisner that Hay Fever

was a reaction analogous to that of anaphylaxis in animals. In 1910, Meltzer proposed the same relation for asthma. Immediately several investigators began to experiment with various forms of proteid extracts. The most popular developed was the dry powder, suitable for the cutaneous, or so called scratch method of testing. This necessitated testing with one form of proteid and treating with another. Dr. Robert A. Cooke, of New York, himself an asthmatic, conceived the idea of making an extract that could be used for both testing and treating, so that more specific results might be expected from the treatment. Following this idea, he began ten years ago to make soluble proteid extracts that could be preserved and used in liquid form. These extracts could, of course, be used for treatment by hypodermic injection. Cooke next tried to find the method of testing that would produce the most intimate contact between the epidermal cells and the proteid. His idea was that the more intimate this contact, the more apt a reaction would be to occur. His experiment produced the intracutaneous method, which is the most sensitive so far developed.

The most difficult part of the entire procedure has been the preparation of a liquid extract in a stable form. The fact that extracts have to be made from a great variety of materials is responsible for this difficulty. Substances now used comprise all forms of animal and bird epithelium, insect powders, tobacco, dust from houses or from individual objects, drugs, sachet powders, face powders, every kind of food, pollens, and, in fact, every form of substance that an asthmatic may come in contact with, numbering into the hundreds and still increasing as new causes are found. Added difficulty arises in the preparation of extracts from such substances as eggs, wheat, and milk—all of which contain two or more proteids that have to be separated for testing. Many of these difficulties are not yet overcome and much remains to be accomplished in this particular phase of the

*Read before the Medical Association of Georgia, Columbus, Ga., May 5, 1922.

work. Methods of preparation and extracting media are still being changed frequently. The extracts are, when possible, sterilized by passing them through a Berkfeld filter. After their nitrogen content has been determined by the Kjeldahl method, they are standardized by dilution and bottled under aseptic precautions. It is preferable to use homeopathic vials covered with rubber caps that permit the removal of fluid by means of a hypodermic syringe. The solutions are kept in the ice-box. Their stability varies greatly, some extracts remaining active indefinitely while others, such as pollen extracts, have to be made fresh every few months.

The technique of testing must be carefully carried out, else results are confusing and the procedure dangerous. Tuberculin syringes, or some modification similar to them, are used. Ground glass syringes are preferable because they are easier to use, easier to cleanse, are more accurate, and do not dilute the extracts with retained water, as do syringes with asbestos wrapped plungers. Ungraduated syringes are cheaper and may be used for testing. Syringes graduated in tenths of a cubic centimeter are needed for treating. As to needles, those of twenty-seven gauge and one-half inch in length have proven to be the most satisfactory. The flexor surface of the upper arm is usually selected for placing the tests. The forearm, back, or hips may be used when necessary. The skin is cleansed with alcohol, stretched tightly, and the injection is made on the dome of the stretched area. Enough fluid is injected to produce a wheal about two millimeters in diameter. This amount is one one-hundredth to one-sixtieth of a cubic centimeter. This fluid must be injected between the layers of the skin and not under the skin. Four to six different injections are made at one time in a child and six to eight in an adult. If no positive reactions occur within fifteen minutes, more tests may be made. If one or more strongly positive reactions develop, it is safer to wait a few hours before mak-

ing more tests. Injections are placed in rows about three centimeters apart, and always in the same order in every patient so that their position will correspond with a list of the substances injected. By this means, if a late or delayed reaction develops, the injection causing it may be identified. Syringes and needles must be cleansed well and boiled after each injection. If a small amount of an extract to which a patient is sensitive is left in a needle or syringe, a reaction may occur when these are used with substances to which the patient is not sensitive.

Positive reactions usually begin within five minutes and consist of a wheal with pseudopod-like projections. Every injection will increase in size at least one diameter and sometimes more. The enlargement increases after ten to fifteen minutes and the sharp outlines become blurred. To avoid errors, reactions should be watched every two to three minutes for fifteen minutes. The wheal should be sharply outlined and the pseudopodia definite. In reading a positive reaction, more attention is paid to the pseudopodia than to the actual size of the wheal. A patient is said to be positive to a proteid when an immediate marked reaction, that may be reproduced at will, is obtained by the test. All positive reactions are checked to prevent errors.

Every patient need not be tested with all available solutions. While taking the history, select from the substances that may cause the disease in question those with which the patient comes in contact, and test with extracts from these substances only. It is important to inquire into the occupations and habits of other members of the household, because they may bring in substances upon their clothing or persons to which the patient is sensitive. A history chart is presented for your inspection: (See next page.)

If the patient suggests a cause of the trouble, extracts of this may be used first. If the patient is unable to identify any special substance as the cause of the dis-

Chart No.	Date.....	192.....	Positive For:
Name	Age	S. M. W. Male F.
Address	Race
Address Relative or Friend.....		
Occupation	Nativity
Chief Complaint.....	Duration.....		Results:
Continuous.....	Continuous with exacerbations--Paroxysmal		Unimproved
Accessory Complaints			Improved
			Relieved
			Cured
Family History:—Asthma, Hay Fever, Eczema, Uricaria, Angio-Neurotic			
Endema, Gastro-Intestinal Disturbances, Migraine, Food or Drug Idiosyncrasies, Obesity, Gout, Rheumatism, Skin Diseases,			
Epilepsy, Chronic Bronchitis, Goitre, Diabetes, Tuberculosis, Cardiac Diseases			
Renal Diseases			
Cancer			
Occupation: Father		Brother	
Sisters		Bed-Fellow	
PAST HISTORY: Measels, Scarlet Fever, Whooping Cough, Diphtheria			
Typhoid, Arthritis, Influenza, Malaria, Headaches.....		Sight	
Taste	Smell	Hearing	Teeth.....
Glands	Thyroid	Edema	Dyspnoea.....
Cardiac Pain.....	Cough.....	Fever.....	Loss of Weight..... Night Sweats.....
Acute Abdominal Attacks		Jaundice.....	
Nausea	Vomiting	Diarrhoea	Dysentery
Constipation.....	Voids	O. D.	O. N. Edema Face
Genito-Urinary Diseases		Menses	
Joints, Muscles, Nerves			
Operations			
Serum or Vaccine Injections			
Cathartics and Other Drugs Used			
Description of Occupation			

ANALYSIS OF PRESENT HISTORY

Duration	Description of Attacks	
		Last Attack
Attacks Increased by		
Attacks Relieved or Made Less Frequent by		
Attacks Accompanied by		
Season	Time of day	Location
House	Pollens and Plants	
Animals and Pets		
Fowls	Bedding	Foods
Drugs		
Perfumes, Sachets, Powders Used		
Physiological Process Related to		
Treatment Received:		
Results Obtained:		

TESTS
INHALANTS

Chicken Ep.			Oats			Orris		
Goose Ep.			Winter Wheat			Rice		
Duck Ep.			Spring Wheat			Cornstarch		
Rabbit Ep.			Whole Wheat			Cornmeal		
Goat Ep.			Rye			Buckwheat		
Horse Ep.			Cotton			Stock Dust		
Horse Serum			Pages Glue			Theater Dust		
Timothy			Cottonseed			Tobacco		
Ragweed			Flaxseed			Insect Powder		
NUTS			MEATS			FISH		
Almond			Beef			Bluefish		
Chestnut			Chicken			Clams		
Cocoanut			Lamb			Crabs		
Peanut, Green			Mutton			Halibut		
Pecan			Pork			Lobster		
Walnut, Eng.			Veal			Oyster		
Walnut, Black								
FRUITS			VEGETABLES			MILK AND EGGS		
Apple			Asparagus			Alb. and Glob.		
Banana			Beans, Lima			Casein		
			Beans, Navy			Caseinogen		
Cherry			Beans, String			3 in 1		
Currants			Beets			Ovomucoid		
Fig			Brussels Sprouts					
Gooseberry			Cabbage			BEVERAGES		
Grape			Carrots			Chocolate		
Grapefruit Peel			Cauliflower			Coffee		
Grape Peel			Celery			Postum		
Lemon			Corn			Tea		
Orange			Cucumber					
Peach			Endive					
Peach Bloom			Eggplant					
Pear			Garlic			SPECIALS		
Pineapple			Lettuce					
Plum			Mushrooms					
Prune			Olives, Green					
Raspberry, Red			Olives, Ripe					
Raspberry, Black			Onions					
Strawberry			Parsnips					
			Peas, Green					
			Potatoes, White					
			Potatoes, Sweet					
			Pumpkin					
			Radish					
			Rhubarb					
			Spinach					
			Squash					
			Tomatoe					
			Turnip					


ease, and the history is not suggestive, it is well to begin the tests with the inhalant group, consisting of timothy, ragweed, animal and fowl emanations, dust, cereals, and any other powdered substance that the patient may come in contact with. Follow these with nuts, fish, shellfish, eggs, milk, vegetables, and fruits. If the history suggests any unusual substance that has not been extracted, an extract should be made from it and tested.

The diagnosis of specific sensitization having been made, treatment will consist in removing the contact with the cause when possible, and hyposensitization when

○ Immediately after injection

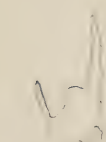
○ Normal Reaction after five minutes

○ Normal Reaction after ten minutes

 Slight Reaction

 Moderate Reaction

 Marked reaction with small indentations

 Marked Reaction

Actual copy of reactions reduced to one-third size.

the cause cannot be removed. This hyposensitization is accomplished by injections of the solutions tested with, but diluted according to the severity of the original reaction.

The diagnosis of the cause or causes of a case of allergy is not in many cases easy. Even when the diagnosis has been accurately determined, if contact between the sensitizing substance and the patient cannot be entirely prevented, results are not always satisfactory, because in some patients hyposensitization is not easily produced. However, when the cause of the disease can be removed, results are per-

fect and instantaneous. In other cases the percentage that can be relieved is large. There is no more grateful patient than one who has been relieved of asthma. Between seventy and eighty per cent of cases can be diagnosed and benefited. In hay fever the percentage is larger, reaching to about ninety, with almost one-half totally relieved.

In emphasizing this method of diagnosis and treatment, we do not desire to detract the importance of thorough examinations in other ways. In every case of allergy, a full history, complete physical examination, and such other examinations as may be indicated, are required. In asthma this is especially important. The greatest attention must be paid to the presence of nasal polypi and nasal obstruction. Next in importance are diseased tonsils, and thirdly, deficient elimination.

It would be unwise not to mention the constitutional reactions that are sometimes caused by the tests. These may not be pronounced and consist only in a slight exacerbation of the manifestations already present; on the other hand, an immediate, violent reaction may occur in the form of a severe attack of asthma or hay fever, accompanied by itching, urticaria, erythema, angio-neurotic edema—one or all. This reaction may reach serious proportions and, in at least one instance, has resulted in death. Anyone witnessing a violent constitutional reaction will never again doubt the specificity of the proteid reaction in these diseases.

The discovery of this specific sensitization to one or more proteids in cases of allergy has presented hope to many supposed incurables, some of whom have been invalids for life. Adrenalin and, at times, morphine, are still necessarily used to combat severe paroxysms of asthma, and local treatment is still of use in other forms of allergy. Correct diagnosis of the specific sensitization followed by proper treatment offers permanent results.

Of the methods of diagnosis that have been developed to the present time the intracutaneous is the one of choice for the

following reasons:

1. It gives the greatest number of positive diagnoses.

2. It is of least trouble to the physician.

3. It gives less pain to the patient, requires less time, and leaves no permanent scars.

4. Diagnosis and treatment are carried out by means of the same substance and therefore more specific results are obtained.

5. Extracts can be made by the physician from any substance desired, so that the work is not limited by the available supply of commercial extracts.

35 Doctors Building.

THE MEDICAL PRACTITIONER AND THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER.

J. E. Rush, M. D., Field Director,
American Society for the Control of Cancer.

Among the most important public health problems confronting the medical profession today is that of cancer control. It is possible to make a division of public health movements into several groups, depending on the amount of educational work which must be carried out before the program can be successful. In one group we find such diseases as Typhoid Fever, Malaria and Yellow Fever which may be controlled simply by educating a few individuals who possess the necessary power in a community to place the program in operation after they have been shown the desirability of such a procedure. This type of activity is relatively simple, because it depends upon the education of a few individuals. Unfortunately, the diseases that can be controlled in this manner are among those which usually do not exact from the populace the greatest economic toll.

Another group of diseases may be effectively dealt with through police power, and here again we depend on the education of a few members of any given community. For the most part the diseases which may be controlled by this means we refer to as "communicable," and usually they can be

very effectively dealt with by placarding, isolation and quarantine.

There is another group of diseases which are not communicable and in which the education of but a few members of the community is not sufficient to affect the mortality rate. Here we find cancer, which depends for its ultimate control upon the education of every single adult of the community, with reference to the early signs and symptoms of the disease, for only in its early stages is cancer curable. With the present attitude of the public to seek medical advice only when they are aware of distressing symptoms, they must be told that early cancer is usually painless, and that proper treatment cannot be instituted until they have sought the advice of a physician.

The medical profession is interested in all types of medicine, whether preventive or curative. As a matter of fact, there really is no hard and fast line of demarcation between preventive and curative procedures any more than there is a dividing line between the metals and the non-metals. The medical profession is interested in all problems of public welfare, but when it comes to matters concerning public health they are the only ones who, through tradition and training, are capable of handling the problems which present themselves for solution. It is the only profession at the present time that is engaged in real preventive medicine, and it is the profession of election for this type of work. Usually public health movements have been initiated by the medical profession, but in many instances the work has passed into the hands of the laity because the members of the medical profession have been preoccupied with other important problems.

What we have said with regard to the attitude of the medical profession toward public health work clearly emphasizes the need of control by the medical profession of all public health movements. The profession is particularly interested in the problem of cancer control, not only because it is of great humanitarian interest, but because of the further fact that cancer

is one of those conditions in which it has been clearly demonstrated that the medical profession is the only one capable of offering a solution. While sanitary engineers, epidemiologists and others may be of great value in the conduct of specific public health movements, their training and experience does not make them capable of helping in cancer control. The slogan of the American Society for the Control of Cancer, that "Early cancer is curable if you will but consult your medical practitioner in time," again clearly emphasizes that the physician is the only one capable of reducing the mortality from cancer.

Another interesting feature of the movement for cancer control is that the establishment of diagnostic clinics during National Cancer Week is of some educational value to certain members of the medical fraternity, because important points of differential diagnosis between early carcinoma of tongue, for example, and primary luetic ulcer are demonstrated. The cancer movement in this respect is one of the few that attempts to repay the physician for the great effort he has expended in its behalf.

It has been claimed by some of the unthinking individuals among the laity that preventive and curative medicines are diametrically opposed. They do not realize that there is, in the last analysis, but little difference between preventive and curative measures. For example, all physicians take blood pressures and make urine analyses during the course of a pregnancy, and not by the wildest stretch of the imagination can this be interpreted as a curative measure—it is a preventive measure pure and simple.

Through various educational movements which are now being conducted to instruct the public with regard to conditions which are definitely preventable, the great mass of the people are gradually coming to realize that the physician must be looked upon as a teacher and advisor rather than one who is to be consulted only when symptoms of a diseased condition have manifested themselves. The physician, too, realizes

that this teaching attitude is appreciated by the public, for by this means he is able to prevent premature deaths among his clientele. Not only does he spare the patient in question for future usefulness, but, more important, he does not divorce the rest of the members of that particular family. The physician realizes that the most appreciative patient is one who, through early advice and proper instruction, has been saved from untold suffering and an untimely death.

All health movements, if properly managed and ethically controlled by the medical profession, will not only eliminate certain objectionable features present in some of them as now conducted by the laity (who have no appreciation of medical ethics), but such activities will help consolidate the medical profession against the ever-increasing influence of the cults. It is true that we, as a profession, do not heartily approve of certain public health movements now in progress, because they do not conform to our ethical code. If they were controlled by the medical profession this objection would be removed.

It must be realized that the cults never would have existed had the medical profession taken a definite stand against them, but realizing that "Imitation is the sincerest flattery," we have allowed them to go on; to exploit the public until even the great mass of the people has recognized the lack of sincerity which prompted the various movements.

The proper extension of these ideas relative to organization in order to control public health problems contains within it the answer to the proponents of that most preposterous type of activity known as "State Medicine."

The organization for cancer control is dependent upon the activities of the medical profession; and therefore the units upon which the organization is built are the State and County Medical Societies. The whole movement has been endorsed and approved by practically all national, sectional, state and local, medical and surgical bodies, because it is entirely con-

trolled by the profession itself. In the perfected organization for cancer control, we have the groundwork to handle other problems of a public health nature, be they ones already in existence or future ventures. By proper organization, too, we shall be in a stronger position to abort detrimental legislation, whether directed at us or to legalize the ignorant cults. A public health problem directed solely by physicians will do more to properly organize the medical profession than any other type of activity.

It has been pointed out that if we do not seriously consider the "scientific attainments" of the cults, then every preventable death is a reflection on us. It has been claimed that the fact that the patient did not come early enough to us for examination and advice is no excuse; that we, as the only logical profession engaged in the practice of the healing art should have the undivided confidence of the public to such an extent that they will report to us what are very trivial matters and thus give us opportunity to institute proper procedures in time. In the vernacular of the street, it has been suggested that we should "sell ourselves to the public;" which in other words means that there is at the present time a great need of ethical publicity on the part of the profession. It really seems that this would, to a very great extent, increase our usefulness to the community in which we practice. If this is true, then no physician can be so busy that he cannot devote a small amount of time to help in the campaign for cancer education, because by so helping he is not only advancing his own usefulness to his community, but is of the greatest value to his medical brothers and to his profession.

A few members of the laity have explained what they have interpreted as apathy on the part of certain of the medical profession toward preventive medicine by emphasizing the fact that preventive medicine was diametrically opposed to curative measures. We of the medical profession realize the fallacy of this. Let us

consider an analogy from the field of engineering. Suppose that ten engineers were bidding on a contract to construct a road between two adjacent cities. Only one could be successful; but would the others put obstacles in the way to prevent him from completing his task? The answer is apparent. They would not; for they would realize that when the public had seen the value of this road, they would demand similar ones in all other directions, and hence the other engineers would have an opportunity to build some of them. I realize that the above example compares a business conducted purely for monetary return to a profession which interests itself chiefly with humanitarian efforts, but the very few of the public who believe that all persons are actuated by ulterior motives should be answered. The good roads analogy applies directly to medicine; for the medical practitioner realizes that each time the public is convinced that it is unnecessary for them to suffer with various ailments they demand the removal of others which heretofore they patiently tolerated. An example may illustrate this point:

A friend of mine who for many years was almost an invalid from recurrent attacks of what was then diagnosed as "inflammation of the bowels," and for which, at that time, there was no known cure, was simply forced to allow the condition to exist which undermined his health and lowered his efficiency. At the present time, because of the knowledge of the laity concerning chronic appendicitis, he would know that an operation requiring him to be at a hospital for but two short weeks would give him complete relief, and enable him to resume his life's work at a greatly increased efficiency.

Our medical ethics instituted at the time of Hippocrates admit of no change; but our interpretation of them may be broadened to meet the changing conditions; especially those which have been brought about during the past two or three decades. It may be necessary to change our ideas regarding proper non-personal

publicity for the medical profession as a whole and for our state and county societies. In this connection I am reminded of the story of the young color-bearer at Gettysburg who had advanced somewhat ahead of the lines, and when ordered back to his position by his commanding officer, replied: "Bring the line up to the flag."

CHILD HEALTH CENTERS.*

G. W. HOLMES CHENEY, M. D.

Atlanta, Ga.

Child hygiene has been a live subject and much has been accomplished to the great benefit of the mother and infant; also the child of school age has been studied and with splendid results, but the pre-school age has been overlooked until recent years. We are just coming to the realization that the so-called pre-school age is a period of vital importance; so much so that future efforts in preventive medicine will be centered here.

In dealing with the pre-school child the opportunity of coming in direct contact with the mother presents itself. We may impress upon her the value and importance of prevention along with the general teaching of home hygiene. By centering our efforts, during pre-school years, we are forestalling pathology. Of course, we find children diseased during this period, but here there is less pathological physiology than at any other period of the child's life. The great goal for which we are striving is to start the educational career of the individual free and unhampered by disease.

This, we believe, is a golden opportunity for our profession, who for years have waged such a self-sacrificing and heroic fight against our enemy, disease. In our great battle we failed to have reinforcements here, and so the enemy has attacked at will, flanking and shattering our lines

at his pleasure. The future, however, will pen a different record, let us hope.

In order to remedy this situation, it is of vital importance that the profession as a whole recognize and assume the leadership in this struggle. To date this has not been true, and so the important movement is being directed by those who are not best suited to the task. Educators and others have had the question to face, for they have learned how difficult it is to impart knowledge where there is a defective human system. To them therefore great credit is due, even though necessity has forced the problem to their attention. The great opportunity along preventive medical lines must be brought to the attention of physicians in remote districts as well as to the ones attending society meetings. This can best be accomplished by those physicians who have been privileged to observe and execute preventive practice. Let us resolve therefore to talk and write our knowledge of preventive medicine at every opportunity, in order that the question may be brought to the attention of members of our profession. When once their interest has been aroused they will carry on.

In accomplishing the best results it is necessary that the many divergent forces be correlated. For instance, the Federal Departments in Washington have included three or more separate agencies endeavoring to promote Child Hygiene. In our midst we might mention the Red Cross, Board of Education, City Board of Health and State Board of Health, as all devoting more or less energy to the promotion of Child Hygiene. If these forces can be resolved into one powerful resultant force, then there will be greater efficiency in achieving the desired end.

The Department of Health, New York City, stands as a model and is ever an inspiration and example of what can be accomplished by properly organized forces. In thirteen years they have lowered the maternal and infant mortality rate from the maximum to a minimum. What greater achievement could have taken place?

* Read before Fulton County Medical Society, January 18, 1923.

How many thousands of lives have been saved? Wherein, by any other method that we know of, could so much for the welfare of humanity and the future of this great city have been accomplished? How many worthier men and women will be developed by being unhampered by the binding chains of pathology?

If our southland, if our state and city keep pace, we must of necessity have forethought and act. If our profession not fall by the wayside we must recognize and realize the potency of preventive medicine.

Child Health Center work in this city was begun, under the direction of the City Board of Health in March, 1922. We have dealt with the mother and infant as well as the pre-school child. Primarily we wished to pursue an educational work including not only enlightening the mother on general hygiene but especially those phases which are prime factors in the prevention of diseased conditions among their infants and children. Our effort, of course, was to work within as great a radius as possible, thereby coming in contact with as many mothers as could be induced to attend the centers. In addition, each child was weighed, measured and examined; defects if any were noted. The mother was then given information relative to her child, and the pathogenesis dwelt upon. She was instructed regarding the prevention of such conditions in the future and wherein she may have been at fault, emphasis being placed on the fact that prevention is all important. If any diseased condition was noted in her child she was then referred to her physician for further direction. As outlined above we have had in mind prevention and have been interested in the so-called "healthy" individual. In the case of the sick child, the mother was instructed to call her doctor immediately.

Therapeutics has played a minor role, we having ordered treatment in only a few charity cases, as recommended by the nurse in charge.

As far as possible we have endeavored to carry out a follow-up system by the vis-

iting nurse, the result being that many cases called their physician upon the advice of the nurse in charge of the given district.

The Health Centers were established in sections of the city, which seemed to be in greatest need of the work. We have not looked upon the work as charity, but as educational. True a great deal of charity has been done among people of extremely limited means.

The public schools of the district selected were chosen as a meeting place. The Board of Education has co-operated in every way and granted the use of the school buildings. Two nurses were assigned to each center. They attend as nurses and visit the homes of their districts.

The first Health Center established was at Pryor St. School. Since the establishment of this center fourteen others have been established. We have endeavored to hold the interest of the local Parent-Teachers' Association, talking to them as a body from time to time, along the lines of Child Health Center Work. We have requested that they keep a standing committee on Health Center work with an active chairman, the duty of this committee being to aid the nurses in keeping the subject alive in the minds of the mothers, and fostering the attendance at the Center.

The Parent-Teachers' Associations have responded and given their hearty co-operation. Their help and interest has been a great aid and of paramount importance.

We beg to report as follows on our work for the past nine months, without taking too much of your time with details:

Number weighed, measured and examined	1,251
Found defective	50%
Defects corrected	53%

It is our desire to acquaint the society fully in regard to this work. In order that our plans be carried to a successful conclusion it is necessary that we have the co-operation of this society and our brother physicians.

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

Office of Publication: 208 Professional Bldg.,
65 Forrest Ave., Atlanta, Ga.

APRIL, 1923

ALLEN H. BUNCE, M. D., Editor

M. C. PRUITT, M. D., Business Manager

Publication Committee

W. E. McCURRY, M. D., Chairman

W. A. MULHERIN, M. D.

T. C. THOMPSON, M. D.

Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

The College of Electronic Medicine, Chattanooga branch, is the latest morsel served by Quackdom to appease the appetites of that vast army of citizenry whom Barnum chose to designate as Suckers.

The opening paragraph of the announcement sent out by this college states that "the use of the Electronic Reactions of Abrams as an aid to diagnosis has never been brought clearly and fairly to the attention of a great many medical men. As the wife of the Mayor of New York is said to have remarked to the Queen of the Belgians, "You said a mouthful."

However, the College proposes to bring this matter "clearly and fairly to the attention" of those medicos who have not the opportunity to visit old "Doc" Abrams, the San Francisco wonder.

The Oscilloclast is a very essential adjunct to these Electronic Reactions, and, in fact, they will not react unless chaperoned by an Oscilloclast. The College has succeeded in persuading Doc Abrams to part with a limited number of these chil-

dren of his brain and are now offering them to the profession and others who have the price, for \$377.50 cash money and monthly installments of five dollars from now on. These Oscilloclasts are rather temperamental little devils and have to be handled by one who is familiar with their various idiosyncrasies. This information will be imparted to the purchasers for an additional fee of \$250.

After complying with the above one can sit tight, practice medicine a la Adams, and send in his \$5.00 per month from then on.

The Oscilloclast does most of the work, so the practitioner can lead the life of Jerry. Just think, whenever a stranger writes you, place a sample of his writing in the Oscilloclast and it will tell you whether he is a Jew or ky klux, black or white, married or sterile, poor man or bootlegger, and what his trouble is. Should he send a drop of his blood, the Oscilloclast will make an "accurate and scientific diagnosis of serious maladies and baffling disease conditions, even in their incipency." There is nothing said about what a drop of urine would cause the Oscilloclast to tell, but for heaven's sake remember your oath of professional secrecy.

Reports from various curious-minded physicians are to the effect that this Oscilloclast resembles a cigar box that has a spool or two tacked to its ends and wrapped with wire; but, then, these doctors are jealous of Abrams and might have distorted the facts. It might look like a sardine can, but, at any rate, you have to give it credit for being some classy clast.

Now, brethren, verily I say to you, wusent you a dang fule to put in four years in a medical college when you could get a pet Oscilloclast and let it do your work?

RABIES IN GEORGIA.

During 1922, 2,476 people were given the Pasteur treatment by the State Board of Health for rabies. This is almost double the number of treatments in 1919. The

report of the State Board of Health for the month of January, 1923, shows 137 persons treated during that month, that being the smallest number of patients the department has had in January for the last five years, the largest number was 204 in 1922.

114 of the patients were white, 7 were negroes. Of this number 85 were male, 36 female. Sixty per cent of the wounds were on the hands, 44.6 per cent were punctures, 50 per cent were scratches, the balance was caused from exposure of a wound, or abrasion, to saliva.

NINTH DISTRICT MEDICAL SOCIETY

The semi-annual meeting of the Ninth District Medical Society was held at Gainesville, Chamber of Commerce building, March 21, 1923. The following program was rendered:

Program.

Called to order by the President at 11 o'clock a. m.

Invocation by Rev. W. P. King, pastor First Methodist church.

Address of Welcome—Dr. Pratt Cheek.

Response by Dr. W. C. Kennedy.

Read Minutes of the last meeting.

Scientific program.

Subject not announced—Dr. Myron B. Allen.

Remarks on Diet—Dr. J. L. Meeks.

In Memoriam—Dr. H. L. Rudolph—By Dr. J. H. Downey.

The Relation Between the General Practitioner and the Surgeon—Dr. Laetus Sanders.

Dr. Crawford W. Long—Dr. J. C. Bennett.

The Work of the State Board—Dr. T. F. Abercrombie, Secretary.

The State Sanitarium, its Work and Its Needs—Dr. Edson W. Glidden, Superintendent.

Report of Cases—Drs. Downey, Burns and Whelchel.

Recess for lunch, during which time officers for another year were elected.

SECOND DISTRICT MEDICAL SOCIETY

The annual meeting of the Second District Medical Society was held at Albany, Ga., March 9, 1923. The following program was rendered:

9:30 to 10 A. M.—Registration.

10 A. M.—Invocation, Dr. J. B. Turner, Albany. Welcome address, Mr. H. T. McIntosh, Albany.

10:15 A. M.—Report of cases, Dr. E. F. Sapp Albany.

10:30 A. M.—“Intra-ocular Foreign Bodies and Treatment with Clinical Demonstration of Result,” Dr. B. H. Minchew, Waycross. To lead discussion, Dr. H. M. Moore, Thomasville.

11 A. M.—“The Acute Surgical Abdomen,” Dr. A. H. Hilsman, Albany. To lead discussion, Dr. Everett Daniels, Moultrie Dr. N. Peterson, Tifton.

11:30 A. M.—“Needed Medical Legislation,” Dr. L. A. Baker, Tifton.

12 N.—“Post-bellum Empyema,” Dr. Frank K. Boland, Atlanta.

12:30 P. M.—“A Study of the Purity and Quality of the Milk Supply of Georgia and Its Relation to the Children Consuming It,” Dr. N. L. Spengler, Donaldsonville.

1 P. M.—Luncheon.

2 P. M.—“Infection of the Kidney and Ureter—Diagnosis and Treatment,” Dr. Y. C. Lott, Albany. To lead discussion, Dr. Charles H. Watt, Thomasville.

2:30 P. M.—“Toxemia of Pregnancy,” Dr. A. B. Reynolds, Reno. To lead discussion, Dr. R. F. Wheat, Bainbridge.

2:45 P. M.—“The Management of Croup in Infants and Children,” Dr. J. S. Beard, Edison.

3 P. M.—“Dengue,” Dr. A. S. Christophine, Attapulugus.

Election of officers.

FIRST DISTRICT MEDICAL SOCIETY.

The First District Medical Society held its semi-annual meeting at Metter, Ga., March 17, 1923.

TENTH DISTRICT MEDICAL SOCIETY

The Tenth District Medical Society was entertained by the Baldwin County Medical Society April 11, 1923. A very interesting program was rendered. This was the second meeting of the Tenth District Society since its reorganization.

County Society Reports

TATTNALL-EVANS COUNTY MEDICAL SOCIETY.

Tattnall-Evans County Medical Society announces the following officers for 1923:

President—Dr. Dan S. Clanton.

Vice President—Dr. J. C. Harris.

Secretary-Treasurer—Dr. J. C. Collins.

Delegates—Drs. J. M. Hughes, B. E. Miller and J. W. Daniel.

Board of Censors—Drs. J. J. Watkins, B. E. Miller and J. C. Harris.

DOUGHERTY COUNTY MEDICAL SOCIETY.

Dougherty County Medical Society announces the following officers for 1923:

President—Dr. A. W. Wood.

Vice President—Dr. N. E. Benson.

Secretary-Treasurer—Dr. W. S. Cook.

Delegates—Drs. W. L. Davis and J. A. Redfern.

Board of Censors—Drs. W. S. Cook, W. L. Davis and I. W. Irwin.

OCMULGEE MEDICAL SOCIETY.

Ocmulgee Medical Society announces the following officers for 1923:

President—Dr. J. M. Smith.

Vice President—Dr. W. A. Coleman.

Secretary-Treasurer—Dr. W. H. Pirkle.

Delegates—Drs. W. H. Pirkle and W. F. Massey.

BUTTS COUNTY MEDICAL SOCIETY.

Butts County Medical Society announces the following officers for 1923:

President—Dr. H. W. Copeland.

Vice-President—Dr. A. F. White.

Secretary-Treasurer—Dr. J. Lee Byron.

Delegates—Drs. A. F. White and B. F. Akin.

Board of Censors—Drs. W. H. Steele, A. F. White and J. Lee Byron.

HART COUNTY MEDICAL SOCIETY.

Hart County Medical Society announces the following officers for 1923:

President—Dr. G. T. Harper.

Vice President—Dr. A. O. Meredith.

Secretary-Treasurer—Dr. T. R. Gaines.

Delegates—Drs. W. E. McCurry and B. C. Teasley.

GORDON COUNTY MEDICAL SOCIETY.

Gordon County Medical Society announces the following officers for 1923:

President—Dr. R. M. Gray.

Vice President—Dr. W. R. Richards.

Secretary-Treasurer—Dr. Z. V. Johnston.

Delegates—Drs. W. R. Barnett and W. R. Richards.

Board of Censors—Drs. C. F. McLain, E. O. Shellhorse and S. F. Hutcherson.

POLK COUNTY MEDICAL SOCIETY.

Polk County Medical Society announces the following officers for 1923:

President—Dr. E. H. Richardson.

Vice President—Dr. G. M. White.

Secretary-Treasurer—Dr. S. L. Whitely.

Delegates—Drs. E. H. Richardson and C. V. Wood.

Board of Censors—Drs. C. W. Peek, W. G. England and J. L. Howell.

FLOYD COUNTY MEDICAL SOCIETY.

Floyd County Medical Society announces the following officers for 1923:

President—Dr. J. L. Garrard.

Vice President—Dr. W. B. Floyd.

Secretary-Treasurer—Dr. M. M. McCord.

Delegates—Drs. R. H. Wicker and W. J. Shaw.

Board of Censors—Drs. Geo. B. Smith, H. A. Turner and W. J. Shaw.

JASPER COUNTY MEDICAL SOCIETY.

Jasper County Medical Society announces the following officers for 1923:

President—Dr. R. F. Cary.

Vice President—Dr. L. Y. Pittard.

Secretary-Treasurer—Dr. J. W. Payne.

Delegates—Drs. F. S. Belcher and J. H. Bullard.

Board of Censors—Drs. J. F. Anderson, L. Y. Pittard and J. A. Brown.

WARE COUNTY MEDICAL SOCIETY.

Ware County Medical Society announces the following officers for 1923:

President—Dr. W. F. Reavis.

Vice President—Dr. D. M. Bradley.

Secretary-Treasurer—Dr. J. E. Penland.

Delegates—Drs. W. D. Mixson and K. McCullough.

Board of Censors—Drs. C. M. Stephens, W. M. Folks and J. L. Walker.

SCREVEN COUNTY MEDICAL SOCIETY.

Screven County Medical Society announces the following officers for 1923:

President—Dr. A. D. Lewis.

Secretary—Dr. Louis Hannah.

Treasurer—Dr. L. F. Lanier.

TRI-COUNTY MEDICAL SOCIETY.

Dr. C. K. Sharp, the efficient secretary of the Tri-County Medical Society, reports it 100% for this year.

News Items

To the Secretary, Medical Association of Georgia:

I am forwarding check for \$5.00 to cover dues of Dr. —, of Upson Co. This leaves us one man in the county that has not paid up for this year and I am expecting to get him before much longer.

We have all been quite busy the whole winter and I think that is the reason the doctors have neglected to forward me their dues earlier this year. We are going to make Upson County a 100 per cent county again this year if it can be done.

Very truly,

R. L. CARTER, Sect'y- Treas.
Upson Co. Medical Soc.

The week beginning March 12th, was "Swat the Fly" week in Cobb County. The fight was sponsored by the Parent-Teachers' Association, with the cooperation of the Cobb County Board of Health.

Dr. T. L. Anderson, Dalton, Georgia, celebrated his 100th anniversary of his birth, March 4th. Dr. Anderson's health is unusually good and he served as host at the dinner for about seventy-five, including children, grandchildren and great grandchildren.

The City Hospital, of Brunswick, for the second time within a few weeks, has received from a local industry a donation of \$500.00.

OSLER'S HEART TO CANADA.

Embalmed in a casket, the heart of the late Sir William Osler, famous physician, was placed in the Osler Library, McGill University, upon its arrival from England. The heart, as well as a medical library, of several thousand volumes, were bequeathed the University by the physician. Special quarters in the new medical building have been set aside for the gifts.

THE ILLINOIS MEDICAL SOCIETY

The Illinois Medical Society proposed medical bill, known as the Carlson-Smejkal Medical Act, as introduced into the Senate and in the House, provides that all, irrespective of what school they graduate from, who desire to treat the sick should be equipped with the following:

(a). Two years in an approved school of art and science.

(b). Four years in a reputable medical school.

(c). One year internship in an approved hospital, and finally

(d). A written and practical examination, including clinic and laboratory test.

The medical profession will watch this bill with interest.

SOUTH CAROLINA MEDICAL ASSOCIATION.

The South Carolina Medical Association held its 75th Anniversary Home-Coming meeting in the City of Charleston, April 17th, 18th and 19th, 1923.

THE GEORGIA OPHTHALMIC CLUB

The Georgia Ophthalmic Club is to meet one day during the Savannah meeting. The exact date depends upon the scientific program—make all plans to attend. Notify Secretary at once if you intend to be present.

CECIL STOCKARD, Sec'y.

Atlanta, Ga.

PIEDMONT SANATORIUM ATLANTA.

We wish to announce to the members of the Fulton County Medical Society the completion of the improvements and the new buildings at the Piedmont Sanatorium. We now have a thoroughly equipped Laboratory, Dietetic Department and Kitchen, Hydrotherapeutic Department, X-ray Apparatus and Laboratory, and in fact, every facility for caring for medical and surgical patients.

The Hospital is open for the use of the patients of every ethical physician in the city, and Dr. W. B. Summerall, who is Superintendent of the Hospital, will take pleasure in seeing that every attention and courtesy is given both the patients and attending physicians.

The prices of beds vary upwards from \$4.00 for beds in semi-private rooms and in the wards. Private rooms are five and six dollars a day without private bath, and seven and eight dollars a day with a private bath. Carefully arranged schedules of charges for the Laboratory, Operating rooms, Hydrotherapeutic Department and X-ray work have been prepared, and information will be sent out about them from time to time.

BOARD OF DIRECTORS.

UNITED STATES CIVIL SERVICE EXAMINATION.

Applications for Civil Service Examination will be rated as received until July 23, 1923, for Junior Medical Officers, Assistant Medical Officers, Roentgenology and Psychiatry; Medical Officers for Tuberculosis, Neuro-Psychiatry, Internal Medicine, Diagnosis and Physio-Therapy. Address U. S. Civil Service, Washington, D. C.

Dr. W. W. Young announces that he will be located for the present at Highland Hospital, Asheville, N. C.

COMMUNICATIONS.

Dr. Allen H. Bunce, Editor Journal of the Medical Association, Atlanta, Ga.—Dear Sir: Will you kindly publish in your Journal the following information concerning examinations by the National Board of Examiners:

Part I.—June 25, 26, 27, 1923.

Part II.—June 28, 29, 1923.

Part I.—September 24, 25, 2, 1923.

Part II.—September 27, 28, 1923.

All applications for these examinations must be made on or before May 15th.

Further information may be obtained from the secretary, Dr. J. S. Rodman; 1310 Medical Arts Building, Philadelphia, Pa. Very truly yours,

J. S. RODMAN, Secretary.

PROPAGANDA FOR REFORM.

Ginseng—Ginseng has found no place in modern therapy. However, it has been reported that infusions of the extract of ginseng root are diuretic. But the most recent study has shown that the drug does not affect the nitrogen metabolism. Even the quack would find it difficult to discover a tenable potency on the basis of which the use of ginseng could be "boosted." (Jour. A. M. A. Feb. 3, 1923, p. 328.)

Mercupressin—From the advertising issued by the Barsa Chemical Co., Inc., 28 West Twenty-third street, New York, for Mercupressin, this product is essentially the same as that which the Spiroicide Corporation, 28 West Twenty-third street, New York, marketed as "Spiroicide." Spiroicide was claimed to be composed of metallic mercury, copper sulphate, cypress cones, henna, nutgalls and dried pomegranates. The product was sold in the form of tablets. For use, the tablets were ignited and the fumes inhaled by the patient. The Council on Pharmacy and Chemistry held that the claims for Spiroicide were unproved and unwarranted, and that the routine use of an inexact method for the administration of mercury is detrimental to sound therapy. The Council's rejection of Spiroicide was subsequently fully sustained by the investigation of the inhalation treatment of syphilis carried out by Cole, Gericke and Sollmann. (Jour. A. M. A., February 3, 1923, p. 344.)

More Misbranded Nostrums—The following products have been the subject of prosecution by the federal authorities charged with the enforcement of the Food and Drugs Act:

Healing Springs Water (Virginia Hot Springs Co.), a moderately mineralized water, containing bicarbonates of calcium and magnesium, and magnesium sulphate (Epsom salt); Brick's Sarsaparilla (Pales-

tine Drug Co.), containing small amounts of sodium salicylate, potassium iodid, plant drug extractives, including sarsaparilla and a laxative drug, sugar, alcohol and water, Yerk's Wine Extract of Cod Liver Oil (Yerk's Chemical Co.), consisting essentially of compounds of sodium, potassium, calcium, iron, quinine, strychnine and phosphorus, extracts of plant drugs, possible traces of col-liver oil, malt extract, sugar, alcohol and benzaldehyde as a flavoring; Anemia Tablets (Carlos M. Rivoll), containing 95 per cent of milk sugar and small quantities of cinchona alkaloids, charcoal, sulphur, gum and compounds of arsenic, phosphorus, iron and sodium. (Jour. A. M. A., Feb. 3, 1923, p. 343.)

Bayer—205—This is said to be a specific trypanosomid. It is said to have no effect on organisms other than the trypanosomes, even those that are nearly related, such as the spirocetes. Most of the work carried out in this country has been carried out with small laboratory animals, but the successful treatment of two human cases of trypanosomiasis is reported. The composition of Bayer 205 is secret, though a hint as to its chemical composition has been discovered which suggests it is a dye of the naphthalene series. It is hoped that in the near future the exact composition of Bayer 205 will be declared, so that scientists will feel justified to carry out controlled experiments with the drug. For the present, the preparation is in the experimental stage. (Jour. A. M. A., Feb. 10, 1923, p. 406.)

A Patented Consumption Cure—The U. S. Patent Office has issued patents for many preparations to be used in medicine for which there has not been the slightest scientific justification. The most recent and most flagrant lack of intelligent patent law administration is to be found in a patent issued to Serkluson and exploited by the Savrite Medical Manufacturing Co., Los Angeles, Cal., for an alleged cure for tuberculosis.

This is the patented cure: Pure olive oil, 1 gallon; squill root, 3 pounds; bitter al-

monds $1\frac{1}{4}$ pounds; nettle (the plant except the root) $1\frac{1}{2}$ pounds; red poppy flower petals, 1 pound. These various ingredients are to be mixed, put in a closed container, gradually warmed and left standing for about 72 hours, when the mixture is squeezed, mixed and filtered. The filtrate comprises the "cure." (Jour. A. M. A., Feb. 10, 1923, p. 420.)

The Patent Office a Federal Rip Van Winkle—No branch of our government is of greater importance to the progress of the country than the Patent Office provided it is intelligently administered. When the Patent Office is used, however, for an extension of the nostrum business founded on the abuse of patent and trademark laws, it becomes a menace to public health. In 1918 a report of the Committee on Patent Law Revision of the Council on Pharmacy and Chemistry recapitulated the effort made for years by the American Medical Association to bring about patent law reform and detailed some of the cruder forms of Patent Office insufficiency in the granting of patents for medicaments. The issuance recently for a patent on a preposterous mixture of squill root, nettle and red poppy flowers in olive oil as a remedy for tuberculosis is a further illustration of Patent Office incompetency.

Both common sense and consideration of the health of the public suggests that the Patent Office should consult the scientific departments of the United States government conversant with medicine and therapeutics in the issuance of patents on medicinal preparations. (Jour. A. M. A., Feb. 10, 1923, p. 405.)

Strychnin and Disturbance of the Vision—The use of strychnin in the treatment of certain visual disturbances appears to be extensive. Its use in ophthalmology was introduced in 1830. In textbooks the claims for the usefulness of the drug in these conditions run from mere assertions regarding the usefulness of the drug in certain eye conditions to statements that it actually increases the acuity and field of vision within an hour after injection of therapeutic doses. Occasionally there is a statement to the effect that the

good results from strychnin are due to psychic influences. And now, ninety-two years after its proposed use, experiments have been made to indicate that the latter opinion is probably correct and that strychnin is without action on vision. (Jour. A. M. A., Feb. 10, 1923, p. 406.)

Brown's New Consumption Remedy—The Postoffice Department has issued a fraud order against B. H. Brown, M. D., of Jacksonville and St. Augustine, Fla., and Brown's Magnolia Remedy Co. For some time Dr. Brown, a negro, has been advertising Dr. Brown's New Consumption Remedy, especially to members of his own race who are afflicted with tuberculosis. In 1917 the federal authorities prosecuted Brown under the Food and Drugs Act, holding that the claims for the preparation were false and fraudulent. Though convicted, he continued making his claims in newspaper advertisements, and in circulars that answered these advertisements. While the Department of Agriculture is helpless to prevent this form of fraud under the provisions of the Food and Drugs Act, the post office authorities are able to reach this form of fraud. The department filed charges against Brown and after hearing the defense issued a fraud order against Magnolia Remedy Co. and E. H. Brown. (Jour. A. M. A., Feb. 17, 1923, p. 495.)

Allen's Goiter Treatment—At Sheffield, Iowa, the Allen Remedy Co. conducts a mail order business in "Dr. C. J. Allen's Goiter Treatment." The A. M. A. chemical laboratory analyzed the Allen nostrum and found it to consist essentially of ferrous and hydrogen iodide (hydriodic acid) in a colored and flavored syrup. The serious side of the Allen Goiter Remedy Co. business is the indiscriminate sale of the nostrum to those who may be, and are likely to be suffering from exophthalmic goiter. It is well known that the use of iodine is likely to aggravate this disease and hence it is not surprising that physicians are beginning to report serious results from the use of the Allen preparation. (Jour. A. M. A., Feb. 24, 1923, p. 572.)

NEW AND NONOFFICIAL REMEDIS.

Bacillus Acidophilus Milk-Lederle—Whole milk cultured with **Bacillus acidophilus**. It contains no less than fifty million of viable organisms (**B. acidophilus**) per Cc. During recent years reports have been published which indicate that the growth in the intestinal canal of the normally present **bacillus acidophilus** may be increased so as to make it the predominating organism, by the administration of milk inoculated with **B. acidophilus**, by the administration of viable cultures of **B. acidophilus** in conjunction with lactose (sugar of milk) or by administration of lactose alone. The therapeutic value of cultures of **B. acidophilus** is still in the experimental stage. For a discussion of the actions and uses of lactic acid ferment preparations, see New and Nonofficial Remedies 1922, p. 156. **Bacillus acidophilus** milk-Lederle must be kept on ice and should be used within one week of the expiration date which appears on each package. Lederle Antotixon Laboratories, New York. (Jour. A. M. A., Feb. 3, 1922, p. 323.)

Diphtheria Toxin and Control for Schick Test-P., D. & Co.—Diphtheria Test (New and Nonofficial Remedies 1922, p. 320) marketed in packages containing one vial of 0.1 Cc. of undiluted, standardized diphtheria toxin, one vial of 5 Cc. of sterile physiologic solution of sodium chloride, one vial of 5 Cc. of diluted control of Schick test and one sterile syringe point. Each package contains material sufficient for fifty doses. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A. Feb 17, 1923, p. 475).

Diphtheria Toxin-Antitoxin Mixture—Lilly. A diphtheria toxin-antitoxin mixture (See New and Nonofficial Remedies 1922, p. 282), each Cc. constituting a single human dose and containing 3 L. doses prepared in accordance with the requirements of the U. S. Public Health Service. Marketed in packages of three vials sufficient for one treatment. Eli Lilly & Co., Indianapolis, Ind.

Schick Test—Lilly. A diphtheria im-

munity test (See New and Nonofficial Remedies 1922, p. 320), marketed in packages containing one vial of diphtheria toxin sufficient for ten tests, and a vial of sterile physiological solution of sodium chloride and in packages of ten vials containing toxin sufficient for one hundred tests, accompanied by ten vials of sterile physiological solution of sodium chloride. As a control, the Schick test control, representing diphtheria toxin of the same lot treated to destroy the specific exotoxins, is supplied. Eli Lilly & Co., Indianapolis, Ind. (Jour. A. M. A. Feb. 25, 1922, p. 553.)

During February, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Eli Lilly & Co.—

Schick Test and Schick Test Control—Eli Lilly & Co.

Diphtheria Toxin-Antitoxin—Eli Lilly & Co.

H. K. Mulford Co.—

Pneumococcus Antibody Solution, Types 1, 2, 3—Mulford.

Parke, Davis & Co.—

Diphtheria Toxin and Control for the Schick Test—P., D. & Co.

Neo-Silvol.

Mercurosal.

Tincture No. 111 Digitalis—P., D. & Co.

BOOKS RECEIVED.

Nursing and Nursing Education in the United States. Conducted under the supervision of Representative Medical and Nursing Educators as follows:

Committee—C. E. A. Wilslow, Dr. P. H., New Haven, Chairman; Joseph Goldmark, Secretary; Mary Beard, R. N., Boston; H. M. Biggs, M. D., New York; S. Lillian Clayton, R. N., Philadelphia; Lewis A. Conner, M. D., New York; David L. Edsall, M. D., Boston; Livingston Farland, M. D., Washington, D. C.; Annie W. Goodrich, R. N., New York; L. Emmett Holt, M. D., New York; Julia C. Lathrop,

Washington, D. C.; Mrs. John Lowman, Cleveland; M. Adelaide Nutting, R. N., New York; C. P. Parnall, M. D., Ann Arbor; Thomas W. Salmon, M. D., New York; Winford H. Smith, M. D., Baltimore; E. G. Stillman, M. D., New York; Lillian D. Ward, R. N., New York; W. H. Welch, M. D., Baltimore; Helen Wood, R. N., St. Louis.

Table of contents:

Part A—"Functions of the Nurse." (1) Public Health Nursing, (2) Private Duty Nursing, The Subsidiary Nursing Group, (3) In Institutions, The Graduate Staff, Instructors and Administrators.

Part B—"Training of the Nurse." (4) The Hospital School of Nursing, (5) Training of the Subsidiary Nursing Group, (6) University School of Nursing, (7) Post-Graduate Courses, Public Health Nursing Courses, Courses for Teachers and Administrators in Schools of Nursing; The Teaching Staff; Teachers' College and Its Influence on Nursing Education.

The MacMillan Company, New York, publishers. Price \$2.00.

BOOK REVIEWS.

How We Resist Disease. An Introduction to Immunity (Lippincott's Nursing Manuals). By Jean Broadhurst, Ph.D., assistant Professor of Biology, Teachers College, Columbia University. Four color plates. J. B. Lippincott Co. Price \$2.50.

Descriptive Comment—This book, designed as a brief introduction to the exceedingly technical and apparently limitless field of immunity, has been prepared with special reference to nurses and general college students whose programs, ordinarily afford opportunity for but a single brief course in bacteriology, the needs of medical students and those able to devote more time to the subject being already well met by the several excellent and comprehensive textbooks on bacteriology and immunology. The author's aim has been to put into clear and simple language the main principles of immunity, covering in a general way the most important preventive and curative practices.

To attain this end briefly, without affording opportunity for a large number of attendant misconceptions, is no simple task, and much attention therefore has been given to the illustrations, not only their number, variety and range, but their legends as well. It has been possible to present a few of the more difficult topics in two—sometimes three—ways, the text, the illustration and the description used with the illustration. In all cases every effort has been made to give enough detail to enable the student to picture the process or the phenomenon under discussion. The terminology has been made as non-technical as possible, many of the scientific terms being used parenthetically only.

Contents—Acknowledgements; Preface; Bacteria and Their Effect Upon the Human Body; Active Immunity; Passive Immunity; Toxins and Anti-Toxins; Agglutinins and Precipitins; Opsonins; White Corpuscles; Lysins; Vaccines; Anaphylaxis; Glossary; List of Infections and Casual Organisms; Advanced References on Immunity; Index.

Labyrinth and Equilibrium. Monographs on Experimental Biology. By Samuel Steen Maxwell, M. S., Ph.D., Professor of Physiology in the University of California. J. B. Lippincott Co., Philadelphia, Pa. Price \$2.50.

Descriptive Comment—The aim of this book is to present an objective study of the equilibrial reactions of vertebrate animals and the mechanism through which these reactions are produced. Discussions of the possible subjective sensations in connection with labyrinthine excitation, and of clinical applications of the facts are both outside the scope of the book. The ears of fishes have proved to be in many ways the most favorable objects for these investigations. The author's experiments on the functions of the different portions of the labyrinth, especially of the otoliths, were possible only because of the large size and the accessibility of the structures concerned. For these reasons the contents

of the book are devoted largely to the description of the experiments on the ears of selachians, and the statement of conclusions which may be reached from these experiments.

Contents — Introduction. Compensatory Motions and Compensatory Positions. Forced Positions and Forced Movements. The Labyrinth as a Whole; (1) The Effects of Destruction of One Labyrinth; (2) The Effects of Destruction of Both Labyrinths. Reactions of Non-Labyrinthine Origin; (1) Contact Reactions; (2) Reactions to Retinal Stimuli; (3) Reflexes from Muscles and Joints. Experiments on the Semi-Circular Canals; (1) Stimulation Experiments; (2) Extirpation of the Ampullae. Experiments on the Otoliths; (1) Extirpation of the Otoliths; (2) Stimulation of Experiments on the Otolith-Organ. The Mechanism of the Dyamic Functions of the Labyrinth; (1) The

Dyamic Functions of the Ampullae; (2) The Dyamic Functions of the Otolith-Organ. The Mechanism of the Static Functions of the Labyrinth; (1) The Static Functions of the Otolith; (2) The Static Function of the Ampullae. The Tonus Effects of the Cristae and of the Maculae. Nystagmus. Literature.

Births

Dr. and Mrs. Jno. B. Fitts, 57 Penn Ave., Atlanta, announce the birth of a son, on Tuesday, March 4th, Hampton Flower Fitts.

Obituary

Dr. T. H. Hall, age 85, died at his home in Dublin, Georgia, February 14th, 1923.

NEXT ANNUAL MEETING MEDICAL ASSOCIATION OF GEORGIA

SAVANNAH, GA.,

MAY 2, 3, 4, 1923

HOTEL DESOTO

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No. 5

SIMPLE GOITER—ITS LOCAL PREVALENCE.*

Charles H. Watt, M. D., F. A. C. S.
Thomasville, Ga.

In thinking over my subject for today my first inclination was to deal with goiter from the surgical viewpoint, since that phase is especially interesting to me, but on further thought it seemed that I might accomplish more for the public good as well as elicit more interest by presenting a few facts concerning the prophylaxis of simple goiter, a disease, according to my own observations, which is unnecessarily prevalent in this immediate section.

Goiter, or enlargement of the thyroid gland, may be conveniently divided as follows:

1. Simple, or Endemic Goiter.
2. Colloid Goiter.
3. Adenomata.
4. Exophthalmic Goiter and Hyperthyroidism.
5. Malignant Growths of the Thyroid.

I shall dismiss the last four classifications with a few brief remarks before taking up more in detail the most common type which is simple, or endemic goiter.

Patients with adenomata and colloid goiters usually present themselves because of the disfiguring tumor in the neck or because of symptoms due to pressure from same. No treatment will relieve these cases except excision. A colloid goiter rarely develops toxic symptoms but an adenoma of the thyroid, if allowed to remain, may later in life become toxic, producing symptoms characteristic of myocardial changes. The average age at which such goiters become toxic is 32, hence we should advise these cases, when

possible, to have the goiter removed before that time. In a few instances the tumor may not develop until after the age of 32 but usually the patients are much younger when the growth makes its first appearance.

The treatment of exophthalmic goiter and hyperthyroidism is more complicated, frequently necessitating a combination of careful and prolonged medical and surgical treatment. Good, but temporary, results are sometimes obtained from x-ray or radium but extreme care must be exercised in the use of these lest the result of treatment become worse than the original disease. Medical treatment, x-ray or radium, are all stepping stones to partial thyroidectomy. Surgery, in my opinion, promises the best end results but it must be admitted that we have yet to attain the ideal in the treatment of these cases.

Malignant growths of the thyroid, of which carcinoma is the most common, are treated by radium, x-ray or surgery or a combination of two or more of these agents. In non-operable cases considerable relief from the distressing pressure symptoms can often be obtained by severing the preglandular structures; in other words, by a decompressing operation. This is followed by radium or x-ray and apparent cures have resulted in a few cases from this form of treatment.

Turning our attention now to the most common form of goiter, that is, simple or endemic goiters, let us consider the statement of Marine and Lenhart, following their work on lower animals, that "simple goiter is the easiest of all known diseases to prevent."

Allow me to bring to your attention the following facts which have been gathered from a thesis by O. P. Kimball, of the Cleveland clinic. These facts may be fa-

*Read before the Thomas County Medical Society, Thomasville, Ga., December 14th, 1922.

miliar to you but it will not be amiss to refresh your memory.

The extent to which simple goiter prevails throughout the world is seldom appreciated. Few countries are free from this disease and in many of these there are localities where the incidence of goiter is so high that they are known as endemic goiter districts. Some of the best known of these districts are in southern Europe, especially the Alps mountain region. It was so common there at one time that it was commonly spoken of as the Swiss neck. In Asia practically all of the Himalaya district is an endemic goiter belt. In South America goiter is endemic throughout most of the Andes region. In North America goiter is endemic in the whole of the Great Lakes basin, in the basin of the St. Lawrence, and in the northwest Pacific region.

Efforts to determine the incidence of goiter in different sections of the United States have been made but no accurate survey of a whole community had been reported previous to the work of Marine and Kimball in Akron, Ohio. Here and there interested workers had made surveys as in West Virginia, where in eleven counties goiters were found in 9% of the school children. In Huntington, W. Va., 50% of the school girls were found to be affected. Local surveys of Virginia showed that less than 0.1% of the goiters found were among boys. At the University of Washington there were found goiters in 18% of the men and 31% of the women, average age 19 years and 3 months.

During the recent war an opportunity was offered to determine the incidence of goiter in young men from the different sections of our country. Washington state showed the highest with 11% and Colorado the lowest with 0.5%. Georgia ranged from 0.25% to 1.50%. Since these figures apply only to the men of this state we may fairly assume that goiter occurs among the girls of Georgia in a far greater percentage.

Goiter is not generally considered as being endemic in Georgia but I feel certain there is more of it in our immediate sec-

tion that there should be and more than casual observation would indicate. Being especially interested in this disease it has become a habit with me to observe the necks of women and girls I pass on the street and it is surprising the percentage of enlarged thyroids one sees; most of them are not large and no doubt pass unobserved by the public and by many physicians. I also have frequent opportunities to see these cases through the kindness of Dr. Moore, who has called me in to examine patients coming to him for other troubles and he has noticed enlargement of the thyroid which had not been noticed by the patient or her relatives. Most of these have been small, but very definite symptomless goiters in school girls.

With these few facts presented to you I believe it to be our duty to obtain information which will enable us to answer the following question: Is simple goiter sufficiently prevalent in our immediate section or county to warrant taking steps toward preventing its occurrence? From my own observations, without a systematic canvass, I should at the present time answer this in the affirmative. Therefore I believe it would be a good public health measure to examine the school children of our county to determine the exact percentage of its occurrence. Should it be found fairly high then I am sure we could enlist the co-operation of the school authorities and greatly reduce, if not entirely eradicate, this disease in our county, as seems to have been done in other sections of this country and abroad.

How can this be done? When one answers, by the proper use of iodine, some may become skeptical. Regardless of such opinions there is abundant proof at hand to prove that it can be done because it has been done, as is shown in the following facts and figures which are again taken from O. P. Kimball's article.

Without going into a detail discussion of the physiology of the thyroid gland suffice it to say that workers such as Marine and Kendall have shown that iodine is an active constituent of the thyroid gland and

is necessary for its proper function. By experiments on animals they have been able to alter the size of this gland by adding or withdrawing iodine from the food or water given these animals. Withdrawal of iodine causes the gland to enlarge hence the assumption, or proof perhaps I should say, that simple goiter is due to deficient supply of iodine to the animal organism. In mammals such as the dog, sheep, ox, pig, rabbit, cat and man, no goiter can develop if the iodine store in the thyroid is maintained above 0.1%. Before 1896 Halsted demonstrated that excision of a part of the thyroid cause hyperplasia of the remaining portion but by the administration of iodine this could be prevented.

In 1917, 3,872 girls in the 5th to the 12th grades in the public schools of Akron, Ohio, were examined for goiter and the results tabulated. These showed:

No enlargement in.	43.6%
Slight enlargement in.	49.9%
Moderate enlargement in.	6.3%
Marked enlargement in.2%
Adenomas in.	1.0%

In other words, there were 56.4% showing some degree of thyroid enlargement. Following this survey the prophylactic treatment was given to more than 1,000 of these girls. Six months later a second examination was made. It was found that 764 had taken the full course of treatment during the preceding six months and 1,879 others had not. There was not a single case in which a normal thyroid increased if the pupil had taken the iodine while among those who had not 26% of those marked normal showed definite enlargement, some already having well marked goiters. More than this just one-third of the "small goiters" had disappeared and one-third of the "moderate goiters" had decreased 2 cm. or more.

Without giving you tiring statistics suffice it to say that the results after 30 months of trial treatment have been most gratifying; in 908 normal thyroids taking treatment 99.8% remained normal, while in 1,257 not taking treatment 27.6% de-

veloped goiter. Recently this prophylactic measure has been recommended to the goiter commission of Switzerland as a public health measure, the most noted endemic goiter country in the world.

The prophylactic treatment, as carried out in the Akron schools, is very simple and briefly consists in the administration of iodine in the form of sodium iodide. This was given in .2 gm. doses every day for 10 days, making 2 gms. in all. This course is given twice a year, spring and fall.

In districts where goiter is found less prevalent than in the region of the Great Lakes, say 25% or less, a less extensive plan of treatment has been used. Instead of giving iodine to every girl in the school they were examined frequently and the moment an enlargement was noticed treatment was given.

Those who have followed the work in Akron and elsewhere are confident that a few generations hence will see the closing chapters on endemic goiter and cretinism in every civilized nation in the world.

CONCLUSION.

In conclusion I should like to submit to this society for its consideration the following suggestions:

1. Due to the fact that simple goiter is not an uncommon disease in our county I believe that it would be time well spent to have a survey of our schools made for the purpose of determining just to what extent this disease does exist among our school children.

2. Should this survey be made and the disease found in sufficiently high percentage, let us say even 5 or 10 per cent, I believe this society should then recommend to the school board the adoption of prophylactic treatment at least for those students showing enlargement of the thyroid. Or perhaps it might be recommended to the parents of the students.

I believe that by undertaking such a survey this society would be doing a public health service which would no doubt have far-reaching results and would be a step in the right direction.

THE USE AND ABUSE OF RADIUM.

Arthur D. Little, M.D., F.A.C.S.

Thomasville, Ga.

First-hand knowledge is always more valuable than hearsay, so I shall in this short paper try to give the impressions I have received from three years' experience in treating lesions with radium.

The first thing I wish to state is that my associates and I have not made any money out of radium; this has been due to the fact that the price of radium within three years has been reduced to \$50 per milligram, thus absorbing the entire profits of the Radium Institute. Nevertheless, I feel whatever we have failed to gain financially has been more than compensated in the knowledge that we have benefited and cured a great many patients, and the community which we have the privilege to serve has profited; and, furthermore, we have gained invaluable experience in handling radium, and this fact will enable us to do a much greater work for suffering humanity in the years to come.

Our early impression of radium was a lack of respect for its power, and we could not possibly believe that it could do us any harm by handling it, and, fortunately for us, two incidents convinced us that we were trifling with fire; the first was the experience of the night nurse at the City Hospital, who removed some radium from a patient early one morning, and having the same lack of respect for its power that we had, she carelessly dropped the radium in the breast pocket of her uniform for an hour, only to be reminded of it in five days when a blister the size of a dollar appeared on her chest; the burn proved quite troublesome and taught us all a lesson.

The second incident was the meeting of a radium expert of Chicago, who exhibited a badly scarred hand which occurred not from any long exposure of radium, but a series of short exposures in handling radium with his fingers instead of forceps.

This same lack of respect for the power of radium caused us some anxiety in the treatment of our first series of patients, but, fortunately, we had sense enough to heed Dr. Howard Kelly's warning to under-expose rather than overtreat our first cases; but even then we had a tendency to want to get the radium in the closest possible contact with the lesion, and consequently we did a considerable amount of unnecessary superficial burning.

We have gradually learned the value of screening, and have learned that you can cure lesions without doing a lot of superficial burning. So much for the first lesson.

The next difficulty we have had to overcome is the selection of cases for radiation. There are two things people are trying constantly to avoid—one is a cure without taking medicine, and a cure without surgery, and that is why we find Faith Healers thriving in the disguises of

"Laying on of hands, Christian Science,"

"New Thought," and "Chiropractic."

One is just as efficient as the other, and each finds plenty of followers on account of looking for an easy non-medical and non-surgical road to health.

So, for the same reason, radium has been easy to introduce to the laity, and it will be used in selected cases for all time. But, for the reason given above, every type of case in the list of diseases have presented themselves for treatment, and a man who has no conscience can make a fortune using radium as quackery; but, fortunately, its expensiveness has kept it out of the hands of charlatans and quacks, and, so far as I know, its use has not been deliberately abused. However, as I will show later, it has been honestly abused.

The only trouble we have had in the use of radium has been on insignificant things like warts, where it was impossible to confine the rays to the lesion and consequently getting burns on perfectly good tissue; this experience has led us to the conclusion that elephant ammunition should not be used on sparrows.

Another lesson we have learned is that in suspicious cases of carcinoma of the cervix we should always remove a specimen for examination, for we should know without a doubt that we are dealing with malignancy, and we are then justified in giving massive doses even if we produce artificial menopause; and right here I wish to say that we believe radium will cure any case of cancer cervix that hysterectomy will cure, but unfortunately the condition is too often so far advanced that neither will cure, but we can always prolong life by the use of radium, regardless of how bad the condition is.

It is almost impossible to say just when a cancer of the cervix can or cannot be cured, unless it has advanced to the inoperable stage, and it is in these unknown quantity cases where we are liable to slip up, for the patient and the family want you to say that the cancer will be cured, and we simply lay up trouble for ourselves and abuse the use of radium if we make any definite promise as to a cure, and we have long since learned that it is much better to let the patient go to someone else if they will not consent to treatment without a guarantee for a cure. It is perfectly alright to express an opinion as to prognosis, but we should be certain that we are not misleading the patient, else we are abusing this wonderful remedy and being untrue to our profession.

Radium should never be used for experimentation on humans unless we feel certain that no harm can be done. So our rule is to stick close to the straight and narrow path of well-defined lesions which are known to be amenable to radium treatment, and leave experiments to the research laboratory.

We know that radium will cure operable cases of cervical carcinoma, and wonderfully benefit the inoperable cases.

It will lessen or stop uterine hemorrhage in proportion to the quantity used, and the dosage is easily controlled to get the effect desired all the way from lessening the amount of menstruation to the production of artificial menopause.

We know it will cure the majority of rodent ulcers, provided they have not metastasised.

It will cure cancer of the lip if the neck glands have not become involved.

It is the best remedy for superfluous hair.

It will cure certain forms of eczema.

It is useful in selected cases of uterine fibroid.

It is especially useful in sarcoma of bones, and will soften scars and absorb keloids.

It is a most valuable remedy in inoperable cancer of the womb, and a wonderful remedy for uterine hemorrhage.

REMOVAL OF ANGIOMATA WITH RADIUM.

Cosby Swanson, M. D.
Atlanta, Ga.

You are all familiar with the lesions under discussion; the subject does not embrace pigmented naevi or other forms of growths frequently seen. Vascular naevi, as you know, are circumscribed, congenital vascular growths of the corium or subcutaneous tissue, or may involve both. They give a deep red or purple color to the skin. They may be present at birth or appear shortly afterwards.

These growths usually occur on face, neck and forearms, although sometimes seen on other portions of the body.

After their appearance they may remain the same size, but in the majority of cases they will gradually increase in size; in rare cases they may disappear without treatment.

As a class, angiomas are very sensitive to both the Beta and Gamma rays from radium, sometimes yielding to doses that produce only slight visible inflammation.

The endothelium of blood vessels is exceedingly sensitive to the rays of radium. When radium is properly used it causes the cells to increase in size so that the lumen of the vessels can be obliterated.

Later degenerative changes take place, causing a complete destruction of the vessels and preventing the formation of new ones.

When I first began the treatment of naevi, before radium was used, my principal methods of treatment were fulguration, CO₂ and in some cases excision. All of these methods were painful and scarring often pronounced and irregular; results proving very unsatisfactory, especially in the treatment of larger growths.

Owing to the disappointing results, I began the use of radium, more as an experiment, as its value in the treatment of these conditions had not been established.

In the first few cases I obtained results hitherto unattainable by any other method of treatment. Since then I have practically abandoned all other methods except in the treatment of port-wine and very small superficial growths.

All angiomas should be treated as early in life as possible, especially if they are increasing in size. The tissues are more sensitive to radium rays early in life, thus requiring less treatment also more time can be given to treatment which gives better results.

The capillary naevi or port-wine stains are, as a rule, small, but occasionally they involve large areas. They are in the majority of cases fully developed at birth. The surface is usually smooth, but may be studded with small vascular elevations.

From my personal experience, I doubt if radium is of any value in the treatment of this type, as the amount of radium necessary to obliterate a port-wine mark will as a rule cause permanent injury to the normal tissues.

McKee says his experience is "the superficial port-wine mark is exceedingly calcitrant to radium."

If radium is used, the result of each application should be carefully studied and the effect of each application should disappear before repeating the treatment.

If complete blanching can be obtained by a moderate amount of treatment, good

results may be expected, but as a rule only a slight diminution in the intensity of the color can be achieved.

Strong treatment is to be avoided, for in the majority of cases it will cause atrophy of the subcutaneous tissue and telangiectasis. My experience has been limited to three cases of this type.

Case No. 1, adult; male, age 23. Lesion on temple extending to forehead, size of child's palm. Radium plaque half-strength was used with .4 mm. aluminum, rubber tissue and two thicknesses of gauze as filter. Treatment was given for one hour every three weeks until four applications had been made.

The growth was removed with slight atrophy of skin and telangiectasis. The telangiectasis was removed later with electrolysis.

Case No. 2, adult; female, age 18. Lesion on right cheek two inches in circumference, irregular in shape, since birth. Half-strength plaque was used with .1 mm. aluminum, rubber tissue and two thicknesses of gauze as filter. Three treatments were given, one hour each, three weeks apart. The last application was given with .4 mm. aluminum filter. Six months after last treatment a slight atrophy of the skin and some telangiectasis was present.

Case No. 3, child; male, age 2. Lesion right side of face, nose and orbital region since birth. Half-strength plaque was used with .4 mm. aluminum, rubber tissue and two thicknesses of gauze as filter. A small patch was given two treatments, one hour each, two weeks apart; reaction was severe, with a slight atrophy of skin. Another patch was treated with half-strength plaque filtered with .3 mm. brass. Treatments were given, one hour each, a week apart, until three had been given. This caused slight atrophy of skin, so treatment was discontinued.

Since then ultraviolet rays (Kromayer Lamp) have been used; areas treated show much better results; treatment being continued.

Nevus vasculosus or strawberry type is most frequently seen on the face. This

type is of a bright red or strawberry color. usually elevated above the surface of the skin. They vary in size from a bean to an adult hand, and involve only the superficial vessels. As a rule they increase in size for a few years; in rare cases they undergo involution or ulceration, and spontaneous healing may take place.

This type of growth is the one in which radium gives the most brilliant results. In small growths one to two treatments are often all that is necessary, while deeper and larger growths require several applications. Have had more experience with this type of growth than any other, and in all cases treated results have been good.

I have treated two cases on lower lip, two on side of nose, two on lower eyelid, three on upper, one on forehead, one on cheek, three on side of neck, five on forearm and one on the thigh.

These growths varied in size from a bean to an adult hand, except the one on thigh, which covered two-thirds of the limb, beginning in the groin and extending below the knee.

Half-strength plaques were used; .4 mm. aluminum, gauze and rubber tissue used as filter. Two-hour exposures were given, and two weeks later the treatment repeated. In some cases it was necessary to give the third treatment.

The larger growths were divided into two to four sections, each section about two inches square. Each section treated was allowed to heal before treating the others.

I found that by adopting this method there is less chance of an abrasion, thus preventing infection and scarring. In the eyelid cases the eyeball was protected with lead foil.

Cavernous naevi are as a rule more deeply seated and lobulated than the two above types. In this type cavernous spaces are present, the capillaries are more dilated, often forming larger vessels than

those found in the other types, and the subcutaneous tissue is more often involved. This type develops more slowly; oftener found on the mucous surface of the cheeks and tongue than the other types.

It is important to treat this type at an early age. If treatment is not given early they increase in size, as a rule, and more treatment is necessary and cosmetic results not as good.

Radium is the only safe method of treatment for cavernous naevi. Wickham suggests the cross-fire method for this type, in which the tumor is attacked from different sides. He states that in some cases a leveling and reduction can be secured without visible inflammatory reaction. That small growths are totally eradicated and extensive ones, if not totally obliterated, are vastly improved.

There is no tendency to recurrence after a cure has been effected. My experience with this type has been limited to one case. Patient, female; age, 3. Growth left cheek, size of child's palm, involving the skin, subcutaneous tissue and extending to the mucous surface. Cross-fire method was used 25 mg. tube screened with .1 mm. brass and rubber tissue. The mucous surface was divided into three sections, each section given an hour exposure each day for three days; total, nine hours. The outer surface was also divided into three sections, each section given two hours' exposure each day for three days; total, eighteen hours. With this method of treatment in some exposures the treatment overlapped. Three weeks later, treatment was repeated. A slight radium dermatitis was produced; growth disappeared with very little irritation and slight atrophy.

All cases I treated with radium did not give perfect results, but where the desired results were not obtained the improvement was better than I had been getting from other methods.

FALSE LOCALIZING SIGNS RESULTING FROM INCREASED INTRACRANIAL PRESSURE.

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It is a rather striking remark, that of Dr. John DaCosta, "that no region of the body is so liable to tumors as the brain," and he substantiates this by the fact that during a number of years the autopsies of the Munich Pathological Institute, as noted by Bollinger, have shown one brain tumor in every 85 autopsies. Hale White's experience is that such tumors are more frequent than this, and he estimates them to occur in one out of every fifty-nine autopsies.

Intra-cranial tumors should include not only true neoplasms, but also growths of parasitic, syphilitic and tubercular origin.

The general symptoms of brain tumor are: Pain in the head, it may be one-sided, frontal or occipital; vomiting and a failing vision. Other symptoms which may or may not be present are: Vertigo, general convulsions, insomnia, mental failure or stupor, paralysis of various members or portions of the body. Choked discs or optic neuritis is present in 80% of all cases, and is a most important sign. The cerebral edema of "Bright's disease" causing albuminuric retinitis, which is similar to choked disc due to brain tumor, must always be excluded in doubtful cases. The processes in both tumor and "Bright's disease" are without doubt identical.

With this as a preface, I want to present briefly a case which came into the Harbin hospital, April, 1922, complaining of occipital headache. She was 52 years of age, and married. Her family and past histories were unimportant, except for the fact that the patient had had "sick headaches for years."

Fifteen months ago there developed a severe occipital headache which radiated to the left temporal region, frequent administration of morphine was necessary, associated with the severe head pain was projectile vomiting, deafness in left ear for two years and tinnitus in the right,

beginning one year ago and disappearing three months ago. There has also been considerable suboccipital tenderness and difficulty of gait, usually falling to the left and forward. Five months ago increasing numbness of left cheek, lips and tongue, with total anaesthesia of the left cornea.

Nine months ago failing vision was first noted, when she found she could not thread a needle as usual; for this she was given glasses, which gave no relief. The foregoing signs and symptoms have all slowly progressed to the present time.

The physical examination showed a well-developed white woman, weighing 200 pounds, lying quietly in bed. The head, lungs and abdomen were negative. Ptosis of left lid, no nystagmus or strabismus, optic discs both showed considerable edema (4D) with an early secondary atrophy, with some narrowing of the visionary fields. There was a cracked pot resonance to the skull. The tongue showed a slight tremor and protruded to the left, with a weakness of the left facial muscles, slight adiadococinesis and hypotonia (left). No astereognosis. Left corneal reflex absent. Right arm and leg reflexes hyperactive. Romberg positive, with patient falling forward and to the left. Coordination tests done fairly well, except for slight past pointing on left. Total anaesthesia on left face and scalp, with an area of decreased sensibility over lateral aspect of lower leg (L5 and S1).

The blood pressure was normal. Urine, blood and spinal fluid examinations were normal. The x-ray films of the skull showed considerable separation of both fronto-parietal sutures.

A diagnosis of increased intra-cranial pressure, probably the result of a lesion of the left lobe of the cerebellum, was made, and on April 29th I did a cerebellar exploration. By this procedure, it was anticipated, if not to find an enucleable tumor, to give temporary relief by decompression. Under ether anaesthesia a cross bow incision was made and the cerebellum exposed in the usual manner. There was considerable pressure, which was relieved by a ventricular tap; no evidence of cyst or

tumor was found in either lobe, no evidence of neuroma; there was, however, considerable thickening of the arachnoid, which possibly might have accounted for the obstruction. The dura was not closed, the wound was closed in the usual manner with silk exclusively.

Because of the patient's weight it was impossible to apply the usual plaster support. As a result of the patient's lying in the one position upon the back, a pressure slough at the occiput occurred.

The occipital pain immediately disappeared following the operation, and by the fourth day, post-operative, the anaesthesia of the left cornea and left face had entirely disappeared, with a diminution of 2D in swelling of the fundi.

Two weeks following the operation weakness of the left facial muscles, including those of the tongue, had almost completely disappeared, the patient was able to walk with less difficulty than she had been able to for months; there was, however, an inclination to sway toward the left, but the tendency to fall forward had entirely disappeared. Reflexes of right arm and leg were still hyperactive. Upon discharge eighteen days, post-operative, fundi showed no swelling; there was, however, a moderate exudate over the left nasal margin and right temporal.

The patient was observed at monthly intervals; the examination at the sixth month, post-operative, showed slight facial weakness, with no choking of the fundi. She complained of a "scratching sensation" over the left cornea, with a troublesome left tinnitus. A letter written by the patient eight months, post-operative, stated that she had never had a recurrence of the severe head pain; the tinnitus persisted and was troublesome; the vision was apparently good.

Conclusions.

1. The point in presenting this case is not to draw any conclusions other than the striking evidence of false localization resulting from increased intra-cranial pressure per se; namely, the sudden disappearance of motor and sensory cranial paralyses and to emphasize the great relief

which can be obtained in these cases, temporarily, provided there is a new growth (and permanently in event the condition is purely an obstructive process resulting from a chronically thickened arachnoid in the region of the cistern).

2. Emphasis should be placed upon a thorough and complete neurological and physical examination in cases showing head pains, cranial or other palsies and failing vision unrelieved, which amounts to a plea for earlier diagnosis of such lesions.

3. That a pressure slough may result in so vascular an area as the scalp as a result of the head remaining in one position over a period of ten days.

4. Relief over a considerable period can be gained by decompression when it is impossible to localize the tumor.

BIRTH CONTROL AND THE PHYSICIAN.*

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In the ancient times physicians were accorded great respect. Theirs was the power to make and administer laws regarding social hygiene and public health.

The Jews regarded their physicians with reverence even to the extent of classifying them as saints. How highly the physicians were esteemed by the Hebrews of latter time may be gathered from the impressive language of Jesus, the son of Sirach, 180 B. C.:

The Egyptians, Babylonians and Arabians for centuries had their legislative bodies composed of medical men, and not one social question concerning public health and hygiene was passed without their approval. We see, therefore, that in the past laws pertaining to public health and social hygiene were made in a highly scientific way and enforced to the letter.

From Moses, to Hippocrates, to Sararus, to Chung Hong Hing, every law of medicine concerning public health was considered before passage by the medical profession,

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and, if passed, approved by them; afterwards they enforced it.

The physician, thanks to his great and noble work, was so closely connected with and involved in the public welfare, that he became a public benefactor. To a certain extent he even became the moralist or preacher of morals among his fellow-men, and there is small wonder that Hippocrates composed that wonderful oath for physicians, which today stands out pre-eminently and occupies a conspicuous place in the offices of physicians.

Likewise, there is small wonder that a physician was many times compelled to fill high executive offices, because on account of the faith, respect and confidence placed in him by the public, he was offered with gladness the highest of honors.

Biblical critics claim that Moses became great as a leader only through his establishment of social hygiene and the enforcement of a rest day for the children of Israel. In short, the chief glory of biblical medicine, as Neuburger rightly says, is in the institution of social hygiene as a science.

Even at the present time, in almost every land of Europe, physicians are highly respected and beloved, and are regarded as the most intellectual and important men in their communities. If a democratic form of government prevailed in these countries, the physician would no doubt play an important role, and would have passed the most scientific public health laws. Of course, under monarchistic governments they cannot accomplish much.

At the present time we see the most important social hygiene questions and the science of hygiene in general being handled by people who do not know medicine; who themselves do not understand the fundamental principles of the subjects they are teaching.

Let us take, for instance, the birth control question.

The International Association of Eugenics has incorporated birth control in its program as the most important question of the day. Who are the members of the Eugenics Association? It is composed of

people of different walks of life, but it is a striking fact that the majority of them are not physicians. In other words, people are trying to solve a problem of which they have no scientific knowledge.

Birth control is a social hygiene question, and it should and must be handled and, if necessary, solved exclusively by physicians. When we say social hygiene, we must not forget that these two words include sex hygiene, which must be studied and explained to the public by medical men only.

Birth control is an important question at the present time. It must be recognized by medical men, and taught and explained by them only. Every physician knows the evil effects caused by lack of the right sort of knowledge of this subject. We know there are many people who lead abnormal sex lives, by which they contract sicknesses.

We see many new neurasthenics among women; and among men those who are sexually impotent, due to abnormal sexual life with the possibility of leading to greater misfortune and tragedy in later life.

We must not forget that thru ignorance, many people become the prey of criminal physicians who thrive by producing a false psychology and who have a monetary value in mistating facts. When a poor woman decides that she cannot bear another child, due to circumstances or to economic conditions, and applies to her physician for prevention, he will not help her. Afterwards, when in the family way, she applies to the abortionist, who does help her, and who, incidentally, destroys human life.

In 1798 the Englishman Malthus published a book: "Essays on Principles of Population." In that book he distinctly stated that should the population increase without interruption, it would become so great, that, in proportion, the earth could not produce enough food. He stated that the increase must be checked—and is checked—by epidemics, famines, poverty and war.

He therefore concluded that, instead of depending upon nature to regulate our

population thru such drastic and troublesome measures, we would do better to regulate it for ourselves.

Although Malthus and his followers had many enemies, up to the present no one has disproved his theory. Malthus' theory will remain true thru all social reform, even under a socialistic form of government.

It is understood, of course, that few women know anything of Malthus' theory, but all of them do know of the difficulty and expense of raising a big family.

A remarkable thing is that rich people and the clergy, who preach so vigorously against birth control, themselves practice it. Statistics prove that the very rich have small families, and in the families of the poor, the reverse is true.

Is it not better that a woman who must act as housewife, servant, manager and mother should have the right and personal freedom to decide how many children conditions will permit her to bring into the world?

We, as physicians, know the feelings of a mother when she loses a child thru poverty or malnutrition; or when any sickness attacks an underfed child who is not in a condition to resist. Let everyone recall the tragedies he has witnessed in the houses of his poorer patients, and he will understand their cry for help.

The Malthusian theory spread from England to Sweden and Holland. Van Hooten, a member of the Holland Government, wrote a series of articles about birth control in 1877, and in 1895 his Government officially recognized the Malthusian League. At the present time the League gives free instructions to every woman who applies for birth control.

In Sweden the propaganda goes forward altho a few years ago Dr. Nystrom was fined a few thousand dollars for a lecture on birth control.

In France the people have used preventive measures or years. The principal fighter and propagandist for sex rights for women was the great educator, scientist and philosopher, Paul Robin, who died

in 1812. Thanks to him, in France, lectures and free consultations have been given about birth control, and a great literature developed. Although capitalists and religious hypocrites have for years attacked the French people and prophesied the extinction of their nationality, we see that the French race not only still exists, but is progressive, and leads the world in many things. It is a striking fact that they have not had an unusual children's epidemic in France in the last fifty years.

In Russia, at a Congress of Physicians and Surgeons a few years ago, the majority incorporated in their program that it should be the duty and practice of every physician to instruct women in sex hygiene and birth control.

I do not wish to go into detailed reasons why so many executive officers all over the world, and especially in the United States, reward those women who bear large families.

Now let us see, from a purely etiological point of view, how much sickness and physical disability we see among our patients which can be traced directly to the wrong practice of sex hygiene. When they cannot get any advice from us, they use their own methods which lead them into trouble. First they practice coitus interruptus. The male patient gets nervous, weak, irritable and a "constant lumbago." This afterwards leads to pain in the sciatic nerve, and, above all, to sexual impotence.

The female becomes neurasthenic and anemic. Many Russian authors have reported cases of hysteria and Dr. Dodnoff even mentions cases of epilepsy. The genitals are irritated, and in many cases, inflamed. We quite often find women complaining of certain developments of leukorrhoea. Smirnoff, in his book, "Masturbation in Male and Female," tells us of two married couples who had masturbated to the point of utter degeneracy. All of these things are due to lack of knowledge of social hygiene.

In conclusion I will say that for the sake of humanity and of the medical profession, birth control and sex hygiene should be

taken up once and for all time by physicians. It should be studied and solved by them, and afterwards taught to those hungry for the knowledge.

Let them give people the right sort of information and they will be benefactors of the human race and save many from great suffering.

Of course, each case must be individually considered by the family physician. First, must be considered the physical strength of the woman; then the economic condition of each family.

And when this question shall have been taken up by the medical profession thru their organized bodies, at the conventions of the American Medical Association, of the American Congress on International Medicine, the American College of Surgeons and the International Congress of Physicians and Surgeons, and other medical fraternities, there will be found scientific means and methods by which to control the birth of children, which will, in itself, cause the development of a better and a stronger generation.

And it is our duty as physicians who relieve suffering, to bring also happiness to our fellowmen.

✓ THE IMPORTANCE OF THE KNOWLEDGE OF THROMBO ANGIITIS OBLITERANS TO THE SOUTHERN PHYSICIAN.*

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I wish to present to the members of the society, some interesting facts concerning a disease which, although not so prevalent in the warmer climates of the South, yet does occur and which invariably is not recognized when seen. This disease is known as Thrombo Angiitis Obliterans, meaning a thrombus in the blood vessels with obliteration of their lumen, and has, within recent years, been recognized as a distinct clinical and pathological entity. The pathological findings of the blood vessels of the amputated limbs show an occlusive

thrombosis of the deep arteries and veins, beginning in the distal arteries of the limbs and extending upwards to involve the large trunks of the foot and leg. If a cross section is made of an actually diseased blood vessel we will find the lumen to contain a red or mixed clot with giant cells, leucocytes, endothelial cells and disintegrated nuclei in its periphery. The media and adventitia are also infiltrated with polymorphonuclear leucocytes. A marked periarteritis may be present. In the healed lesion, the vessels have a tendency to the establishment of a supplementary circulation by the formation of vascularized connective tissues (organization) with canalization of same.

Because of its similarity to other allied conditions, such as Raynaud's disease, erythromelalgia, scleroderma, neuritis, intermittent limp, etc., a tentative diagnosis of one or other of these conditions is made and improper treatment instituted which usually hastens the destructive process. The clinical symptoms of this disease are so characteristic that a diagnosis can always be made and proper therapeutic measures applied which would bring welcomed relief to the afflicted patient.

Before describing the symptoms and treatment, I will refer briefly to the predisposing factors, which are believed by many clinicians to have a direct bearing upon this condition.

1. Sex: While almost all cases occur in men, an occasional typical case may be found among the female sex.

2. Nationality: This condition seems to have a predilection for Russian, Galician and Polish Jews, although a few typical cases have been reported among other nationalities.

3. Age: The most frequent age is between 25 and 40.

4. Neuritis: Some believe that neuritis plays an important role in the production of the disease. It is clear to understand if one studies its pathology that the nerve changes are due to their involvement secondary to the periarteritis, which is almost always a constant factor, and the dis-

* Read at the twenty-second annual session of the Chattanooga Valley Medical and Surgical Association, July 12 1922.

turbed circulation and nutrition as a result of the arterial obliteration.

5. Neurotic individuals.
6. A lesion of the spinal cord.
7. Syphilis.
8. Excessive cigarette smoking.
9. Rye bread (excessive).
10. Disease of the ductless glands. (Thyroid and suprarenals.)
11. Increased viscosity of the blood. (Mayesima.)
12. Typhus fever. (Goodman and Bernstein.)
13. Hyperglycemia. Willy Meyer showed that, in these cases, the ingestion of 100 grams of glucose after a brief fasting period produced hyperglycemia. If this is true, why do not all diabetics give a clinical picture of thrombo angiitis obliterans and show the same pathological picture that we get in this disease? Buerger has proven conclusively that this is a disease of the blood vessels rather than the blood, that it is a specific disease accompanied by specific changes in the vessels and that pulsation is never restored in a vessel occluded by it.

14. Infection: Buerger came to the conclusion that, because of the constant and typical histological picture encountered, there must be some specific microbial agent at work. Although this organism has never been found, research workers are daily working toward that end. Most clinicians are in favor of that theory and it appears to me to be the most logical deduction.

Symptoms.

At the Mount Sinai Hospital, N. Y. City, and in my private practice I had the good fortune to observe and study over 150 of these cases. Intermittent claudication is one of the earliest symptoms that the patient complains of and is particularly noticeable when he attempts to walk, when he is compelled to stop and rest until this annoying condition disappears. A peculiar discoloration of the foot which may as-

sume various hues depending upon the pathological changes present in the diseased vessels, is characteristic. The color which is usually of a reddish hue in a large majority of the cases may assume a dusky hue if there is additional dilatation of the superficial venous capillaries, or a cyanotic hue if there is venous obstruction. Marked pallor is present in a few cases. A feeling of cold in the affected foot or toes is also an almost constant complaint of these patients and has given rise to innumerable incorrect diagnoses such as frost-bite, Raynaud's disease, etc. In a certain number of cases, because of the thrombosis of the superficial veins, red cutaneous nodules or cords make their appearance, are extremely painful, and are usually situated over the external or internal saphenous veins. I have seen a few cases where the upper extremities became involved, although this is not common, the lower extremities being more often affected. After the disease has progressed for a variable length of time trophic ulcers begin to appear which invariably compels the patient to consult his physician. These ulcers more often appear upon the toes but may occur upon other parts of the affected foot. They are very painful causing loss of sleep, weight, etc. The pain in some cases is so severe that suicide may be attempted. A very characteristic feature which I have never seen absent is the reddening of the affected limb in the pendent position, and blanching in the elevated and improve only when the circulation be- position. These ulcers run a chronic course. In a number of instances gangrene may supervene, causing loss of toes. These patients are very susceptible to cold air, particularly when their wounds are being dressed, it causing the pain to become more intense and sometimes unbearable. As a result of these symptoms, these patients become neurotic, emaciated and anaemic. Typical mental symptoms may develop as a result.

Palpation of the dorsalis pedis and internal and external plantar arteries will reveal enfeeblement or entire absence of

pulsations, depending, of course, upon the pathology that exists.

Treatment.

The therapeutic measures used in the treatment of this disease are as follows:

1. Local measures, such as baking, electricity, etc.

2. Drugs, either by local application or given internally. Among these may be mentioned nitroglycerine, potassium iodid, and mercury.

3. Hypodermoclysis, and the intravenous administration of anti-coagulating substances.

4. Glandular extracts.

5. Ligation of the femoral vein, and arterio-venous anastomosis. These measures have been given a trial in various hospitals throughout the country, with very unsatisfactory results.

Since 1917, I have treated a number of these conditions all being typical cases of thrombo angiitis obliterans, and it was described in the Journal A. M. A., March, 1917, issue. The treatment which I used was an ordinary Bier's suction apparatus in which the affected foot was inclosed, and by means of a suction pump, negative pressure applied. The results noticed were improvement in color, either considerable abatement or entire disappearance of pain in the toes and foot, rapid healing of ulcerations, increased warmth, etc. The treatments are given daily, or three times a week, the usual length of treatment being about 15 minutes.

In closing I wish to emphasize:

1. General practitioners should be on the lookout for this condition, particularly if it occurs in a Russian.

2. He should be able to differentiate this disease from the other trophic conditions which may affect the lower extremities, and apply proper treatment.

3. If the case is diagnosed as such with minor operations upon the foot, as it aggravates the symptoms in every instance.

As I have stated in a previous paper, only when the real etiological factor is dis-

covered, will we be able to apply a true specific therapeutic agent, or institute proper prophylactic measures which would bring welcomed relief to thousands of these sufferers.

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INFANTILE DIARRHOEA.*

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One of the commonest and most troublesome of the disorders of infant life is diarrhoea, and furthermore there is no disease which is responsible for so large a number of deaths as are due to diarrhoea at this age. Still, of London, has gathered the reports of that city from the registrars, showing that approximately one death out of every five from all causes under one year of age is the result of diarrhoea. What is the matter? Is it the result of bad hygiene and sanitation? The city of London is more sanitary today than ever before, yet reports show a higher rate of infant mortality than when the city was less sanitary. What then is the cause? The record also shows a much lower mortality under six months than between six and twelve months. Anyone will admit that the resistance is lower in an infant during the first six months than during the second six months, therefore why is it that the record shows more deaths between six and twelve months than under six months?

The location of diarrhoea may be in any portion of the gastro-intestinal canal or it may involve the entire bowel. Probably the most frequent location of the infection causing diarrhoea is in the colon. There are several reasons for this, name-

*Read before the Seventh Congressional District Medical Society at Cedartown, April 4, 1923.

ly: The colon is in more of a fixed position than the small intestine, it is relatively longer in an infant than in an adult, is more sacculated and has more kinks and is very lazy, the splenic flexure by its curvature and decrease in diameter offers some resistance to the complete emptying of the transverse colon, which would produce a certain amount of stagnation and naturally cause the colon to be a good field for bacterial activity. Very little food is taken up by the lymphatic circulation in the large intestine, yet toxins are readily absorbed from this area of bowel.

The bacteria may attack only the food in the bowel, producing food toxins, which may irritate the mucous membrane and cause fermentative diarrhoea. In this condition the attack comes on very abruptly and the baby is changed from one apparently well to one desperately ill within a very few hours. However, these babies get well almost as quickly as they get sick, if the bowel is cleansed out thoroughly from the beginning and a very careful feeding given.

The bacteria may attack the wall of the bowel, causing a sloughing of mucous membrane, blood, pus, etc., in the stools. These babies do not usually get desperately ill so suddenly, but the attack is often extended over a much longer period. This type is known as infectious diarrhoea and bears a very close resemblance to typhoid fever. In order for this type of diarrhoea to recover, the infant must have a very thoughtful and systematic feeding extending over several weeks.

In reference to the treatment, it is simply resolved into a matter of correct feeding, since our best authorities contend that about 90% of diarrhoeas of infancy are caused through improper feeding. Statistics from the Great Ormond Street Hospital for Children in London show that of the infants of that institution who die of diarrhoea, 96% of them up to nine months are artificially fed. Only 4% of these babies who die of diarrhoea are breast fed, therefore it would seem to be almost entirely a matter of feeding rather

than drugs. Why is it that so many babies die of so-called "summer diarrhoea" who are bottle fed, yet the mortality of the breast fed is practically no higher in summer than in winter? Can it be anything else than wrong feeding? Climatic conditions have some influence, for in the winter the cold retards bacterial growth. In the hot days bacteria are in their glory. They multiply rapidly and are more active, therefore careless feeding in the summer months is only laying the foundation for high morbidity and mortality rates.

Here, I would like to emphasize a very important point: the special liability to severe diarrhoea in infants fed on condensed milk. It is advertised to the public as a sterile food, and therefore very useful in avoiding the risk of diarrhoea in infancy. It may be sterile but you no doubt know that sterility is only one point in the matter of food. The food must be well-balanced if you want a well-balanced baby. On the other hand, condensed milk seems to render an infant more susceptible to severe diarrhoea. The unbalanced nature of condensed milk with a very high cane sugar content, lowers the resistance of the infant and thereby makes it more liable to be overcome by infections within or without the body. Condensed milk very often makes a very fat baby, but just stop and examine and see how little muscle and bone it has. The muscles are flabby and the bones are small and soft. If baby develops diarrhoea just watch how very quickly this plump, fat baby changes into an emaciated and weakened little mortal with only a fighting existence. All medical men, to my knowledge, who have made any advanced study of scientific infant feeding are agreed on the proposition that condensed milk is unfit as a food for infants and will not use it at all only possibly temporarily over a very short period of time. Some excellent men in our profession have advised mothers to use condensed milk for their babies, but it was because the physicians giving the advice had been giving their time to the study of some other

branch of medicine, rather than infant feeding, therefore were not familiar with the unfavorable results which often follow the feeding of condensed milk to babies.

Babies should not be weaned prior to the tenth month unless there is a demand for it, which cannot be overcome. There are a number of conditions which might affect the mother and make weaning imperative. I want to emphasize the opinion of our best authorities that all infants should be weaned by the end of the twelfth month. If the weaning is begun about the ninth month then by complementary or supplemental feeding of cow's milk, the baby can be trained so as to wean itself by the time it is one year of age. I might add that in my experience with babies, I find it just about as easy to wean a baby from the breast in July as in January if the feeding is properly adjusted; in fact, it might be some easier in July, for during that hot month we do not trust to cold and heat. We are more accurate with the food we use. It is the food and not so much the hot weather which makes it harder for a mother to wean a baby in hot than in cold weather.

When a baby has to be weaned there is no better food for it than fresh milk from the cow, preferably the Holstein, but it may not be possible to get good milk, also it may not be convenient to keep ice all the time to keep milk from spoiling. Spring water is not cold enough to prevent milk from spoiling. We have learned that milk must be kept below a temperature of 50 degrees Fah. in order to retard bacterial activity.

Probably the cause of the greatest trouble among infants in the summer months is not unsanitary milk, but high fats, as most babies have a low tolerance for fats. Eighty per cent of the fats are digested by bile. Infants as a rule have a relatively small amount of bile, therefore the excess fats are not digested, for lack of bile, and the fats are decomposed in the bowel with a result of toxic absorption and irritation of mucous membrane causing diarrhoea.

Dry milk in my estimation is best for

bottle fed babies. I have used it in a series of approximately 500 cases with excellent results. All the water has been removed from the milk by evaporation leaving only the dry solids. This dry milk or "Dryco" is not only sterile but contains all the essentials of fresh milk, except a reduction in the fats to 2% when the milk powder is mixed full strength. This reduction in fats makes it very much to be desired in weaning a baby, also for regular feeding where a low fat is required. In all cases where good milk cannot be obtained or where it is not practical or convenient to keep ice, there is nothing better as a food for infants than dry milk. Being free from water it will not easily spoil and hot weather does not affect it. A feeding can be prepared fresh at each period in about five minutes. Babies like it and it is almost a "fool-proof" food for infants; with a little study, any physician can direct the feeding of dry milk with perfect safety. As for rickets and scurvy, I have not seen a case in these 500 babies, yet in most cases I adopt the rule of "safety first" and give orange juice after the fourth month.

As for drugs in diarrhoea, very few are needed if you get your feeding properly adjusted. Clean out the intestinal tract at the beginning with calomel or castor oil. If there is fever I use Merck's Dextrose as a food. The fact that dextrose is assimilated just as it is taken into the stomach makes it very easy on the digestive organs, also it is an excellent food to use in dehydrated cases where acidosis is liable. I usually add one teaspoonful of either B. B. or B. A. culture to each feeding of dextrose. I don't know how much good it does; however, I believe there is a select class of these diarrhoeas where we get good results. I feel sure this medicine does no harm. I keep up this dextrose feeding with the B. B. or B. A. culture until blood and pus disappear and the temperature drops near normal, then I begin with sterilized skimmed milk or possibly protein milk and continue until mucous disappears, then I slowly add the cream to the skimmed milk as the child's

tolerance for fats is raised and continue to make the food in the direction of normal feeding as the child's condition improves. I do not use bismuth in diarrhoea. Hill, of Boston, says that bismuth does not only do no good, but that it often acts as an irritant, sometimes a poison, and conceals the very picture in the appearance of the stool which is most helpful to the doctor.

Hill also says that an antiseptic which is strong enough to kill bacteria in the intestinal canal is strong enough to kill the baby. If bad feeding caused the disturbance why not give the time that we are using in prescribing intestinal antiseptics to the study of correct feeding and try to undo the mischief which has been done? There are entirely too many drugs used in treating infants. The more we study the feeding problem the less use we will have for intestinal antiseptics, opiates, etc. I use a little paregoric sometimes when there is considerable tenesmus, but I never use it to check the bowels. Proper feeding will do that. Elixir lactated pepsin has no action on the food in the bowel, and while it may not do any harm why not center our efforts on the thing which modern science and experience have demonstrated will give us best results? We have reached the period in the development of our science when we should refuse to prescribe just to please the family. What the family wants and what we want is results. Proper study of each infant will usually prevent our resorting to a wholesale prescribing of drugs. Get the idea in the mother's mind that the most important thing she can do to help the baby get well is to follow your feeding schedule to the letter, otherwise she will put more faith in the medicine and if either medicine or food has to be left off she will leave off the food and give it every drop of the medicine. If we are going to treat infants, I feel that it behooves us to study feeding and not give so much time to the study of drugs, and our results will be much more gratifying.

WHY ADENOIDS OFTEN PERMANENTLY INJURE FEATURES, MIND AND HEALTH.

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It is important that physicians, nurses and teachers should be informed regarding the symptoms of adenoids, that they may be early detected and promptly removed before permanent injury has been done to the features, mind and health of the child.

The first and foremost objective symptom of adenoids in children is mouth breathing. The mouth is constantly open to some degree and it is of little use to admonish these children to stop breathing through the mouth. A healthy child will never breathe through his mouth unless the nose is or has been stopped up; therefore, mouth breathing is the chief and characteristic evidence of adenoids.

The facial expression is characteristic. The child exhibits a more or less vacant stare, a listless look in the eyes. Because of the underdevelopment of the upper jaw, the upper lip is usually thick and short, while the under jaw, being larger in proportion, protrudes somewhat outward.

The adenoid child is usually regarded as stupid. This mental stupidity and inattention to his surroundings results from a dulling of the hearing, and the hearing has been injured by extension of catarrhal inflammation from adenoids lying about the mouth of the eustachian tube, down through the tube to the ear. The eustachian tube presents a direct channel of communication between the throat and ear; its purpose being to equalize the air pressure in the ear.

These children are always undersized; pigeon breasted; several inches short for their age and five to ten pounds under the average weight. They suffer from general backwardness and are usually two or three grades behind other children of their own age in school work.

They soon develop high arched palates:

and narrow pointed noses. These deformities are due to the fact that nature makes no effort to preserve useless structures, accordingly, when the adenoids stop up the nostrils and the nose ceases to functionate as a breathing organ, nature proceeds to enlarge the mouth upward, encroaching more or less upon the nose; and this change in development not only accounts for the peculiar, narrow face of the adenoid victim, but also accounts for the crowding of the teeth and production of the prominent and irregular appearance of the teeth, together with the pinched and contracted nostrils.

The voice is muffled, the resonance diminished; the tone is dull and dead; the breathing offensive and disagreeable; resulting directly from the mass of adenoids in the nose and indirectly from the stomach disorders accompanying this deplorable state of affairs.

These children are slow to respond to commands and dull in following directions; not only because of the stunted mental growth but also because they are usually hard of hearing; and the perception has become more or less dulled on that account.

The Subjective Symptoms of Adenoids.

The symptoms which the child himself first experiences is a loss of appetite. He complains of a bad taste in his mouth; the sense of smell is considerably impaired; loses the relish for his former favorite dishes; and he becomes subject to numerous and frequent attacks of biliousness and other stomach disturbances, followed by marked distention of the abdomen.

The child soon presents evidence of a chronic nasal catarrh, and, if old enough,

complains of constant dripping of mucous down into the throat, and if younger than 5 or 6 years of age, is found constantly hawking and spitting to avoid swallowing adenoid secretions. About this time he may be subject to frequent slight attacks of fever. These spells of fever may be due to disturbances going on in the stomach and bowels, or they may result from the absorption of an unusual amount of the poisonous toxins of the bacteria which live and thrive in this mass of adenoid tissue.

The child begins to lose all interest both in work and play, and only with difficulty can the attention be concentrated on any one thing. He seems to have lost his power of concentration. He is extremely restless through the day, fretful and peevish, and manifests a tendency to go from one thing to another. At night he is exceedingly restless, rolling and tossing about in bed, constantly throwing off the covers. He is frequently disturbed by night terrors, and in many cases these children, when young, are victims of nocturnal enuresis.

Arrested Mental Development.

Direct infection of the ear, manifested by frequent attacks of earache, makes its appearance and the entire mental development of the child is arrested; often the speech becomes defective and a complete change in the facial expression is produced; unless the adenoids are promptly removed, the lines of this facial deformity may be carried throughout life.

This is the picture of the adenoid child—a picture which should alarm any physician or nurse and lead to quick removal of the adenoids and tonsils.

**CONSIDERATION OF EYE, EAR, NOSE
AND THROAT CONDITIONS AT THE
GEORGIA STATE SANITARIUM,
MILLEDGEVILLE, GA., WITH
REPORT OF CATARACT OP-
ERATIONS PERFORMED.**

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In 1910, soon after I became an assistant physician at the Georgia State Sanitarium, I noted the need of special attention to eye, ear, nose and throat conditions in many of the patients who came under my special supervision. A number of them had discharging ears, hypertrophied and diseased tonsils or senile and traumatic cataracts, which had resulted in total blindness. In some instances I found blindness as a result of pterygium, which—as you all well know—is a condition easily corrected. In following to the post-mortem room one particular case in which syphilis had been recorded as the cause of death, I found the ethmoid, maxillary, frontal and sphenoid sinuses completely filled with pus. The patient was very much emaciated, and there is no doubt in my mind he died as the direct or indirect result of pansinusitis.

At that time also there were at the State Sanitarium a number of feeble-minded children, suffering from hypertrophied tonsils and adenoids, which conditions seriously impeded their physical growth and undoubtedly, in some degree at least, retarded their mental development. Practically nothing had been done for these children prior to my connection with the institution, when I found at least 75 per cent of these unfortunates suffering with the troubles I have mentioned. For some years now a school for these feeble-minded children has been conducted in the institution under the direction of Miss Bonner. Most gratifying results have attended this great work, and I feel sure that the correction of the nasopharyngeal and other pathologic conditions has enabled these children to give a better response to instruction.

At first I found it very difficult to gain the co-operation of the other physicians at the institution, as the regular demands upon them were exacting, and—unlike myself—they had given no especial attention to eye, ear, nose and throat work. I was also greatly handicapped by lack of proper instruments, as in the judgment of the Superintendent the financial condition of the institution did not justify expenditure for their purchase. But, realizing the great need for this work and being much interested in it, I began to acquire equipment at my own expense, so that when I left the institution in 1918 I had a fairly well-equipped office. Likewise, while still connected with the Sanitarium, I made several trips to New York, where I took special training so as to become better fitted for this work. In 1918, having established my office in Milledgeville, I began my work at the State Sanitarium as visiting specialist. I now had opportunity of making a complete eye, ear, nose and throat examination of every patient entering the institution where the admissions average about fifteen hundred a year. In all cases where it was possible to get any co-operation on the part of the patient, attention was given to the pathologic conditions which were found.

Apparently, the only work of this kind which had ever been done at the Sanitarium previous to my connection with it was two cataract operations performed by a specialist called in from outside. The result in both cases was complete destruction of both eyes from loss of the vitreous at the time of operation. The cataract operations here reported were upon patients either entirely blind, or showing tendencies toward glaucoma as a result of the cataract. The diagnoses in these cases included the following psychoses: senile dementia, dementia precox, manic depressive insanity, epilepsy and imbecility. Operation was attempted only when the patient was in a quiet state, and in every case his full consent was obtained, and I was given assurance of his co-operation. Often, however, the mental condition was such that at the time of the

operation the patient failed to give it, and in no case did I have the full co-operation one would expect from a patient with normal mentality.

Five, out of eighteen operations performed, are here reported: Mrs. B. F. M.—age 70; psychosis; senile dementia; senile cataracts; totally blind.

Corneal section, left eye. February 23, 1917, following which the patient had an irido-cyclitis; 20-200 vision in that eye. Right eye operated December 17, 1917; corneal section with iridectomy; irido-cyclitis also followed this operation; with correction, she has 20-100 vision in this eye. Before operation all the patient's wants had to be attended by others; she now takes care of herself.

E. H.—age 73; psychosis, senile dementia; senile cataracts—blind in both eyes for five years. (On account of incomplete records, dates of operation cannot be given). The patient was very anxious to have his sight restored, but at time of operation was very nervous. He also had very prominent frontal and cheek bones, making it difficult to perform the operation.

The right eye was first operated on, corneal section with iridectomy being done. There was some loss of vitreous at time of the operation, and also a subsequent cyclitis. After waiting six months, the left eye was operated on by corneal section; on account of prolapse and a coloboma which was made at the time of operation an ididectomy was not done; subsequent irido-cyclitis. With correction he has 20-70 vision in the right eye, and 20-100 in the left eye. He now looks after his own wants and is very much pleased with the results.

W. H.—age 55; psychosis, imbecility; senile cataracts, totally blind. This patient had been confined to his bed for months, and on account of being blind had lost the use of his limbs.

A corneal section was done upon the right eye; the patient did not co-operate, no vitreous loss at time of operation. There was a subsequent cyclitis which was under treatment for three months, as the

patient would remove the bandage and rub his eye, even though a special attendant was constantly with him. A corneal section with iridectomy was done on left eye, following which he developed an irido-cyclitis. After the eye was quiet I attempted to refract the patient, but on account of his mental condition could obtain no co-operation. I gave a plus-10 diopter lens with a plus-150 cylinder axis 180 in both eyes. At the present time the patient walks about without assistance, recognizes people and looks after his own wants.

E. W. (colored)—age 31; psychosis, imbecility; congenital cataract, totally blind in both eyes. This patient had lost the use of his legs through the necessity of confining him to bed, as he could not get about in the ward unassisted, and the number of attendants was too small to permit his having special care.

A needling of the right eye was first done, followed the next day by a linear incision and an attempt to wash out the swollen lens, which, however, became infected. Following this the patient had a phosis bulbi. On the left eye a preliminary iridectomy was performed, followed by three discissions, each done after the eye was in a quiet state. Results good. No attempt was made to prescribe glasses on account of the mental condition, but without correction the patient is now able to look after himself, and is much happier than before operation.

Mrs. A. M.—age 42. Senile cataracts, psychosis: manic depressive insanity; totally blind, traumatic cataracts resulting from injuries inflicted by the patient sticking needles in her eyes.

At time of operation the patient was quiet. Immediately following corneal section of the right eye contraction of the orbicularis, with considerable loss of vitreous, took place, with prolapse of the iris into the incision. On account of the patient's excited condition I immediately applied a bandage and an irido-cyclitis followed, which was given the usual treatment. On account of the results of this operation on February 8, 1921, I did an

iridectomy of the left eye, followed in two weeks by a discission and again by a second discission after the lapse of another two weeks. This was again repeated in two weeks, each time waiting until the eye was quiet. Refraction; right eye, plus-10 sphere with a plus-3 cylinder, axis 135, vision 20-70; left eye, plus-12 sphere with a plus-150 cylinder, axis 120, vision 20-40, plus-50 for reading. This patient has joined the school of occupational therapy which was started by Dr. W. P. Walker, who has done a great deal for the treatment of the insane. Dr. Walker states that this patient is already much brighter mentally, her physical condition being improved also, and hopes that in time she will be greatly benefited.

The results of these operations are not, of course, as good as those to be obtained in the same conditions upon the sane. However, it is a beginning, and I hope in the future to be able to render a better report. Operations of any nature upon the insane are not always satisfactory, on account of the frequent lack of co-operation from the patient. Especially is this true of cataract operations and the after-care of such cases.

I have written to thirty institutions similar to ours, hoping to be able to compare my report with what is being done elsewhere, but I find that they are carrying on no work in any way comparable to what our Sanitarium is now doing. The authorities of the State Sanitarium are now sending one of their assistant physicians to make a special study of eye, ear, nose and throat work, defraying all his expenses, and upon his return will provide a fully-equipped office so that he may devote his entire time to ophtho-oto-nasolaryngological work. So far as I can ascertain, this has not been done in any other institution, though we must take into consideration the fact that ours is the second largest in the United States under one management, and also that other similar institutions are in or near large cities so that the attention of a visiting specialist is easily obtained.

In conclusion, let me say that the help-

less condition of the mentally defective and hopelessly insane inmates of our state institutions should and does make a strong appeal to our sympathies, and if special attention to the diseases peculiar to the eye, ear, nose and throat, many of which readily respond to proper treatment, will in anywise contribute to improving the general health or mitigating the suffering of these unfortunates, it should assuredly find a permanent place among the remedial agencies of all such institutions.

THE PROBLEM OF MORTALITY IN SURGICAL STATISTICS.*

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Surgery has for its object the cure of disease and the saving of life, the question of the former being one of election by improving such conditions as may be expedient for a better stage for operative procedure and the question of the latter being no choice in taking whatever hazards there may be offered, using our wits to run a handicapped race with some acute emergency.

Statistics sufficiently extensive covering a long enough period of time should be competent to point out the weak points of any systematic procedure and it is safe to say that a conscientious surgical diagnosis can prognosticate an overwhelming majority of the hazards of surgical disease and a surprise mortality should be so rare that it would be a negligible contingency. So luck is practically of no moment in surgical prognostication.

Since the establishment of Harbin Hospital there have occurred a series of 8,429 operations covering a period of fourteen years with 129 deaths. Our first year mortality rate was 3.5% while the last report gave 1.5%. There were six surprise mortalities in this series (embolism 2, shock 2, gastro-intestinal paresis 2, following cholecystectomies in the obese with negative autopsies) being an average of one in every 1,405 operations. A surprise

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mortality is one in which careful preoperative and operative examination cannot reasonably predicate.

It would be fortunate if the laity could be made to understand the true hazards of surgical diseases with and without operation because much needless anxiety would be avoided.

The problem of lessening the mortality rate should never become a closed question in surgical practice and should ever create an open mindfulness for improvement. Inasmuch as there is less surgical discretion available in traumatic cases, this class will not be considered in this discussion.

There is a golden opportunity for either the prevention or cure of disease when discovered early but as a rule the surgeon is denied the privilege of this opportunity in certain serious cases and must take what is offered and do as best he can and statistics will point out where his efforts are needed most.

Surgical risks may be classed as standard or normal and substandard, there being intermediate grades between these extremes.

Age is a mere incident in this classification and older patients become substandard more by organic disease than by age. The oldest patient in this series of operations was 91 years and his convalescence from operation for strangulated hernia was quite normal.

Hypertension in the absence of demonstrable pathology should not reduce a patient to the substandard class for ordinary procedure.

The same is true of a heart organically diseased that is compensating, but associated with toxic processes, gravity is added to the situation. However, disturbances in late convalescence would offer certain unforeseen dangers.

Chronic nephritis along with albumen and casts with a fair amount of functioning should not offer a serious handicap. In this fourteen-year period we have not seen a case of death attributable to post-operative uremia.

Obesity, diabetes, and jaundice readily reduce a patient to a substandard class

but such conditions are susceptible of preoperative improvement.

We have been led to believe that dehydration is a more frequent element of post-operative hazard than is generally supposed, especially in obesity.

Proper treatment of diabetes is effective and drinking quantities of water mitigates the evils of jaundice.

A reasonable degree of anemia does not constitute a hazard which would be increased by acuteness. A blood count of more than two million with 30% hemoglobin would offer a fairly good risk.

A maiden patient thirty-eight years old bled heavily for ten days from an essential hemorrhage of the uterus despite palliative efforts. When first seen on admission her hemoglobin was 30% and red cells 1.14 millions. After the insertion of 50 mg. of radium with nitrous oxide anesthesia the hemorrhage ceased, and rather unexpectedly death occurred twelve hours later. The margin of vital resistance being so small such a contingency could have happened even from a reaction from transfusion.

In acute abdominal conditions sepsis and gastro-intestinal toxemia bring about the most common hazards not only on account of toxins but the mechanics of peritonitis which results in dehydration thus adding a sector to the vicious circle. Pre-operative and post-operative injection fluids would obviate these dangers to a certain extent.

There seems to be prevalent in the medical profession an impression that the induction of premature labor for certain reasons is comparatively a safe procedure. In our experience it has seemed the reverse of that belief and the same is true of laparotomies during pregnancy and the profession is awakening to the danger of Caesarean section.

I do not believe we comprehend the extent of the prevalence of deaths from septic abortion and pernicious nausea and vomiting of pregnancy which dangers can readily be removed by a timely, simple operation. There is too much of a tendency to regard these as minor ailments. In

this series of operations, shock, a number of years ago, claimed two deaths but latterly it has been almost an unknown occurrence.

There has been no death that could be ascribed to an anesthetic. While a few alarming mishaps occurred years ago from the use of chloroform we have abandoned its use entirely except in obstetrics.

Morphine—nitrous oxide—ether sequence has been the routine for over five years and has proven to be uniformly satisfactory and certain disagreeable effects have had only minor importance.

Post-operative pneumonia has been very rare and we have records of only one death from this cause in a septic case about ten years ago.

The arch enemy of surgical statistics is still the appendix and of a total 1,141 appendectomies (with a mortality of 1.9%) there were 491 operations for acute appendicitis with 22 deaths—a rate of 4.5%, subdivided as follows: acute 331 with no deaths perforative 77 with 15 deaths; abscess 83 with 7 deaths.

The answer to this menace is early diagnosis with operation but this ideal is too often not practicable because of patients living in remote sections.

In the presence of spreading infection conservative technical procedure should be the rule. We have made it a practice to treat every case of drainage after operations for appendicitis as a diffuse peritonitis because the degree of virulence although apparently mild, cannot be demonstrated at the operating table. Our efforts in the presence of active peritonitis should be to stress from the beginning the prevention of dehydration.

The next most frequent cause of death after operation is intestinal obstruction either primary or else subsequent to other operations. In this class were 78 operations with 18 deaths.

There were 74 operations for incomplete abortion with 4 deaths (5.4%) which is a higher rate than that of 115 operations on the gall bladder which had a mortality rate of 4.3%.

Empyema of the pleural cavity claimed three deaths in 48 operations and 30 operations for pelvic abscess sustained a mortality of 3.

In fourteen operations for acute cholecystitis 3 deaths followed.

Operations for mastoiditis were seventy-five with 3 deaths, and peritonitis from unknown causes claimed 2.

In twenty-three operations for goiter there were 2 deaths and obstetric causes claimed 2.

Twenty-seven miscellaneous causes claimed one death for each.

Incidentally there were 1,586 tonsillectomies without a death.

I take this opportunity to commend the earnestness of the members of the Attending and Associate Staffs of the hospital in the production of this record.

CONCLUSIONS:

1. In a general surgical experience of fourteen years there were 8,429 operations with 129 deaths or 1.5% and excluding 33 deaths among traumatic cases there were 96 from diseased conditions in which 75 or 78% of these deaths arose from general abdominal diseases from which the acute abdomen, claimed 54 or 56% of the totals deaths. The mortality from acute appendicitis was 23% of total deaths from all causes of disease.

2. The mechanics of peritonitis bring about a condition of dehydration which intensifies toxemia.

3. Older patients become substandard surgical risks more by disease than age.

4. Hypertension in the absence of gross pathology would not increase the risk for ordinary surgical procedure and the same is true of nephritis without serious impairment of function.

5. Obesity, diabetes and jaundice are serious hazards to be reckoned with.

6. Anemia with a blood count of two million or more and hemoglobin at least 30% would be safe for ordinary surgical procedure.

7. The menace of surgical mortality in the treatment of incomplete abortion, in-

duction of premature labor and Caesarean section is not sufficiently appreciated by the profession at large.

8. Our statistics show that a surprise mortality in general surgical experience occurs in about .07% of total operations and 4.6% of total deaths.

9. Our greatest field for improvement of statistics in operative procedure lies in the acute abdomen whose toll of 56% of deaths from disease should theoretically be well nigh zero by early diagnosis and prompt operation.

REPORT OF A CASE OF ACCIDENTAL VACCINATION FOR SMALLPOX WHICH WAS MISTAKEN FOR ANTHRAX.

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An unusual lesion of the chin was observed in the case of a young farmer from South Carolina, who came under observation in the spring of 1921. As only two other cases can be found on a search of the literature, which show the similarity between accidental vaccination for smallpox and cutaneous anthrax, this case is reported as a curiosity, and at the same time to call attention to a condition which should be kept in mind in making a differential diagnosis of cutaneous lesions of the face.

The first of these two cases was reported by Howse (1) in 1899. The lesion resembling an anthrax bleb was on the cheek of a 19-year-old girl. The possibility of its being a vaccine vesicle was considered, but no history of an inoculation could be obtained. Serum from the lesion did not show anthrax bacilli. Realizing the danger of allowing a case of anthrax to go untreated, Howse excised the vesicle en masse, which left a large cicatrix on the cheek. Bacteriological and pathological examinations proved it to be a vaccine vesicle, and on further questioning of the

patient it was found that she had been nursing a child which had been vaccinated for smallpox.

The other case was reported by Sheen (2) in 1904, where the accidental inoculation of the cheek of a woman by a recently vaccinated child simulated cutaneous anthrax.

Both of these cases occurred in women who were nursing vaccinated children. No record can be found where this diagnostic problem has ever presented itself in the case of a man.

Report of case:

R. L.—Age eighteen, came complaining of a sore on his chin and of swelling of the face.

F. H.—Unimportant.

P. H.—Had measles, mumps, whooping cough and diphtheria when a child. General health excellent. Patient is a farmer, and works daily with live stock.

P. I.—About two weeks ago the patient noticed a small "sore" on his lower lip, which he thought was a "fever blister." As he had had frequent attacks of fever blisters in the past, he paid little attention to it. He describes the original lesion as a "whitish blister," which he scratched open. He applied some salve which his doctor had given him previously for fever blisters. He also applied some vaseline. Three or four days later the "sore" began to spread and to get worse instead of better. Two days ago the lesion developed what he calls a "white rim" around it. At the same time the left lower jaw and left side of the neck began to swell. The swelling has gradually increased, which has caused a moderate amount of pain and limitation of motion of the jaw. Today the patient has headache, loss of appetite, general malaise and considerable pain about the lesion and lower jaw.

P. E.—Temperature 100.4; pulse 82; respirations 20.

Examination shows a well-developed and well-nourished young man who looks as if he were in some pain. The most striking feature of the examination is the lesion on the chin and the swelling of the left side of the face. The lesion is just

below the vermilion margin of the lower lip and a little to the left of the midline. It is about two by two and a half centimeters in diameter. The edges are irregu-

lar and raised, being nearly one-half of a centimeter above the surrounding skin. This raised rim of the lesion is composed of a series of confluent vesicles which show beginning desiccation. The center is depressed, showing a marked umbilication. The surface is dry, but when the top is picked off one of the vesicles a drop of cloudy fluid is obtained. There is a faint pinkish-red areola surrounding the lesion, while the remaining skin is of normal color. The swelling is most marked beneath the lesion, and under the jaw on the left, but extends from a little to the right of the midline of the chin across to the left ear and from just beneath the left eye down on the neck, almost to the clavicle. There is considerable swelling of the lower lip. On palpation there is a local elevation of temperature of the skin over the swollen area. The skin is smooth and tense. The tissues beneath are indurated and quite firm. The edges of the swollen area fade away without any well-marked borders. The entire swollen area is sensitive and the lesion itself is exquisitely sensitive. The cervical lymph glands can



Shows the lesion on the chin with the raised rim of confluent vesicles and depressed center. Also the swelling of the lower lip and chin and left side of the face and neck.

lar and raised, being nearly one-half of a centimeter above the surrounding skin. This raised rim of the lesion is composed of a series of confluent vesicles which show beginning desiccation. The center is depressed, showing a marked umbilication. The surface is dry, but when the top is picked off one of the vesicles a drop of cloudy fluid is obtained. There is a faint pinkish-red areola surrounding the lesion, while the remaining skin is of normal color. The swelling is most marked beneath the lesion, and under the jaw on the left, but extends from a little to the right of the midline of the chin across to the left ear and from just beneath the left eye down on the neck, almost to the clavicle. There is considerable swelling of the lower lip. On palpation there is a local elevation of temperature of the skin over the swollen area. The skin is smooth and tense. The tissues beneath are indurated and quite firm. The edges of the swollen area fade away without any well-marked borders. The entire swollen area is sensitive and the lesion itself is exquisitely sensitive. The cervical lymph glands can

range, because of the induration of the tissues on the left side of the face. No ulcers in the mouth. No other cutaneous lesions. The remainder of the physical examination is normal.

Urine is negative, except for a trace of albumen.

Blood—R. B. C., 4,600,000; W. B. C., 10,600; hemoglobin, 90%.

Differential Count—P. M. N., 71%; P. M. E., 1%; L. L., 10%; S. L., 14%; L. M. & Trans., 4%.

A search for spirochetes in the serum from the lesion with the dark field illumination was negative.

Wassermann was negative.

Stained smears of the cloudy fluid from the vesicle showed a few pus cells with occasional cocci, but no bacilli. The fluid was more of the nature of serum, and was not frank pus. A search was made for actinomyces, blastomyces and other fungi, but none could be found or grown on cultures.

Cultures showed staphylococcus aureus.

As this case presented identically the same appearance as two cases of anthrax

of the face which had been seen from this section of the country this same spring, and as this lesion was typical of the classical description of the anthrax bleb, it was diagnosed "anthrax."

Stelwagon in his text-book epitomizes the description of the malignant pustule of anthrax as follows: "The appearance and subsequent rupture of the vesicle or bleb, the central depression and eschar, the rapidly developed ring of vesicles or blebs around this necrotic center, with the surrounding induration and swelling, make up a typical picture which is scarcely mistakable."

In this case the lesion did begin as a vesicle, which the patient ruptured. The pictures show the depressed center surrounded by a ring of vesicles, which is said to have developed rapidly. The pictures also show the surrounding induration and swelling. In addition, there were the constitutional symptoms of fever and general malaise, which go along with anthrax.

The strong argument against anthrax was that no bacilli could be found on repeated examination of smears made from the lesion. Before giving the anti-anthrax serum, the details of the history were gone over more carefully. This revealed the fact that the vaseline applied to the original vesicle had been used by other members of the family. Further inquiry revealed the fact that the vaseline had been used by the patient's three sisters who had been applying it to their arms, which had been vaccinated for smallpox. It was quite evident then that the patient had vaccinated himself on his lower lip by applying to a fever blister vaseline contaminated with the smallpox virus. The patient had never been vaccinated for smallpox. No special treatment was given. The temperature was over a hundred for two days, but was normal on the third day of observation. It required two weeks for the swelling to completely disappear. The scar ran a course similar to the scars on the arms of his three sisters, and left a similar but smaller scar. In a recent communication, the patient says that the

scar is now about the size of the "head of a nail," and is scarcely noticeable.

20 Ponce de Leon.

1. Howse, H. G.: Review of Surgery During the Past One Hundred Years. *The Lancet*, 1899, ii, 1717.
2. Sheen, William: A Case of Accidental Vaccination Inoculation Simulating Cutaneous Anthrax. *The Lancet*, 1904, ii, 1494.

SULPHARSPHENAMINE IN THE TREATMENT OF SYPHILIS.*

Elton S. Osborne, M. D.
Savannah, Ga.

In the near future "606" will be abandoned by the medical profession. Sulpharsphenamine, a new medication, seems to be efficient to effect a cure, is not irritating to the tissues, and can be given as a simple hypodermic injection. Why should such an extremely irritating solution as "606" be injected into the blood coming in contact immediately, in concentrated form, with the heart muscle and other vital organs?

In 1910, the discovery of "606" by Dr. Paul Ehrlich revolutionized the treatment of syphilis. As the drug is extremely irritating to the tissues it was necessary to give it in a vein. Literally millions of doses have been given and the frequency of severe reactions show that the vital organs of the patient do not entirely escape the poisonous effect of the drug. The intense toxic effect of the drug is demonstrated when some of the solution leaks into the tissues, resulting in sloughs and often death of the tissues involved.

Dr. Ehrlich, attempting to find a product less poisonous to the tissues, continued his experiments and finally presented to the medical profession NEO SALVARSAN as a less poisonous product. Today the medical profession uses nine doses of neo salvarsan to one of the old salvarsan or "606."

Neo salvarsan has a number of serious defects: it is irritating to the tissues, has to be given in a vein; it is a very uncertain drug, it is a drug of very uncertain chemical composition and its solutions are

* Read before the Georgia Medical Society, Chatham County, January 28, 1923.

unstable. In 1913, Dr. Ehrlich pointed out that neo salvarsan in solution readily undergo oxidation accompanied by an increase of poisonous effect of several hundred per cent.

Roth has demonstrated that the shaking of the solution with air for a few minutes, as is so often done to dissolve it, increases its poisonous effect enormously. He also demonstrated the fact that from 25% to 30% of the neo salvarsan deteriorates in the ampule. Bearing all these factors in mind, it will be appreciated that in the administration of this drug it is extremely difficult to tell what you are giving and still more difficult to tell what the effect will be on the patient.

Before the advent of "606" in 1910, giving of medicines in the veins was not practiced generally, it was realized that this method was not without an element of danger, although it had been advocated several times before it was not generally adopted.

"606" was so toxic to the tissues that it could not be given any other way except intravenously; this forced the average physician to use this method, and millions of intravenous injections have since been given. Voegtlin (1) last year stressed the dangers of giving medicines in the veins and stated that it should only be used as a last resort; that the therapeutic efficiency of these drugs given hypodermically is as great as an equal amount given in the vein.

These poisonous drugs given in the vein bring them in immediate contact with the heart and other vital organs in far greater concentration than by other methods. (1) Five milligrams of caffeine per kilogram of body weight rapidly injected into the vein of a dog will cause death by heart failure, whereas several hundred milligrams can be given hypodermically with impunity.

We do not know the ultimate effect of

salvarsan on the heart muscle of our patients; the introduction of these drugs directly into the blood may upset the equilibrium of the blood, which we know to be marvelously adjusted. Any method that will allow us to dispense with putting these poisonous substances directly into the blood is certainly desirable.

Recently SULPHARSPHENAMINE has been introduced. It can be given hypodermically; has great stability; constancy of toxic and parasitocidal properties and efficacy of curative action. Voegtlin states (1) that the ratio between the curative and the maximum tolerated dose is at least as good as with arsphenamine; (2) in a series of cases of rats infected with trypanosomes, sulpharsphenamine produced a greater percentage of cures than arsphenamine or neo arsphenamine: In a series of cases of rabbits infected with spirocheta pallida, on the basis of arsenic content, sulpharsphenamine has superior spirochetacidal value to arsphenamine.

The American sulpharsphenamine is not yet on the market. My experience has been with sulpharsenol, a French preparation made by the Laboratoire de Biochimie Medicale, Paris. With a limited experience of only forty doses used in syphilitic eye conditions, I believe the curative effect compares favorably with arsphenamine. It would seem that it is a great advance in the treatment of syphilis. It is "fool-proof," and the administration is no more difficult nor is there any more reaction than in the administration of the various vaccines and sera. Above all things, in the administration of sulpharsphenamine, we comply with one of the fundamental medical laws laid down by the greatest of all physicians, Hippocrates, "Be sure that you do your patient no harm."

1. The limitations of intravenous medication. Carl Voegtlin, Journal A. M. A. Vol. 79, No. 6, P. 421.

2. Sulpharsphenamine: Its manufacture and chemotherapeutic properties. Voegtlin, Public Health Reports. Vol. 37, No. 45, P. 2783.

USE OF VERATRUM VIRIDE IN PNEUMONIA.*

C. Van Wood, M. D.
Cedartown, Ga.

More than twenty years ago when I casually mentioned to a doctor friend of mine that I had an unholy fear of veratrum but that I was very fond of aconite, especially in diseases of children, his reply was, "Why veratrum? I'm afraid of aconite." I did not learn from this man. I pursued along the even tenor of my way as a country doctor, kept using my aconite, and dreading veratrum, until two years ago I had occasion to call into consultation a very eminent member of our profession to see a most virulent case of lobar pneumonia and was given a jerk when he informed me that his chief reliance in these cases was veratrum, given up to its physiological limit and held there. My paper will henceforth deal with and be a synopsis of my experience with this drug from that date to this.

I do not want to be misunderstood. I do not advocate the routine use of veratrum, but in well selected cases it has proven a great help in times of trouble. I am well aware that lobar pneumonia is a distinct infection excited in a great majority of cases by the pneumococcus of Frankel; that this infection, localized in the lung, is characterized by inflammation of the lungs, high temperature and toxemia, usually of great intensity. We have this stage of engorgement, where microscopic examination reveals marked distention of the capillaries with blood, followed by that of red hepatization where the lung is a solid mass, where microscopic examination shows the alveoli to be filled with a fibrinous coagulum and thrombi are seen in the capillaries—this stage followed by gray hepatization which as you well know, is a simple liquefaction of the exudate.

As you are well aware, the usual case of lobar pneumonia presents a picture of great distress, with flushed cheeks, rapid respirations and a full bounding pulse due

to the increased resistance in the lesser circulation. At this time we find also that the pulmonic second sound is unduely accentuated and should this resistance reach an extreme degree we will see dilatation of the right ventricle, manifested by feebleness of the pulmonic second sound, a small pulse, an increase in the area of cardiac dullness to the right of the sternum, cyanosis and labored breathing. I do not mention high temperature for I do not place any great reliance on veratrum for the reduction of temperature, and frankly, I do not fight a temperature under 104 F. in this disease, for I have serious doubts regarding the fact that oftentimes our efforts to reduce temperature do our patient more harm than does the temperature. Anyway, it is not the temperature that is harmful but the underlying infection. But it is in these sthenic cases I would place my main reliance in veratrum and the great majority of our cases are of this type. During the past two years I have had in my work nine cases of lobar pneumonia of the type described so incompletely, with a mortality of one.

In this series of cases I began the use of the tincture of veratrum at my earliest opportunity, giving it preferably in small repeated doses, with instructions to the nurse to keep it up till the pulse reached 100 and to be guided afterward by the pulse, withholding or pushing the drug, keeping always in view that I want the pulse kept as near 100 beats per minute as possible. I feel and believe that veratrum depresses the vasomotor centers, forces more blood into the splanchnic area, while the peripheral organs and lungs are depleted, thereby, to a certain extent, taking the load off the right heart, preventing or delaying the dilatation of the right ventricle with its trail of unfortunate sequellae. I am not afraid to give veratrum in heroic doses if needed to reach my desired result. I have yet to see a case of vomiting produced by it that was not easily controlled, and we have always with us its antidote, opium.

In conclusion I would say that I do not lose sight of other measures in the treat-

*Read before the Seventh Congressional District Medical Society at Cedartown, Ga., April 4, 1923.

ment of these cases, and I have at no time used this drug to the exclusion of all others. Therefore, there must be an element of doubt in our minds just how much credit to give it exclusively, but I have reached that stage (dangerous, perhaps) where I find myself leaning upon it, keeping careful watch upon the right heart, controlling a heart that wants to run away and a heart that will pound itself to death unless controlled, and paying less attention to the lung involvement, for, believe me, gentlemen, I have seen on more than one occasion a patient, turned and twisted by a physician in his anxiety to see whether his pneumonia had crept up an inch, left fifty per cent worse than when he entered the sick room.

REMOVAL OF SAFETY PIN FROM THE ESOPHAGUS.

J. H. Buff, M. D.
Atlanta, Ga.

Chief Complaint—Inability to swallow, regurgitation of liquids, pain.

Family History—Not of importance.

Past History—Well-nourished child. No diseases of childhood.

Present Illness—Patient swallowed an open safety pin at 9 o'clock in the morning and since that time has continuously regurgitated liquids, but did not vomit any blood.

Physical Examination—Child well nourished and about six months of age, with a drawn expression on the face, and crying.

Palpation—Negative.

Percussion—Negative.

Auscultation—Lungs and heart normal. Abdomen not distended.

Temperature, pulse and respiration normal.

Fluoroscopic examination revealed an open safety pin in the middle third of the esophagus about one and three-quarters inches in length, with the spring part down and the point and clasp up. The pin of the new make with the covering over the coil spring part. The distance between

the clasp and the pin point being about one inch.

Diagnosis was made on the fluoroscopic examination and history. Per Oral Esophageal removal was advised, using Jackson's esophagoscopes and specula without an anaesthetic.

Problem.

Pin cannot be pulled upward on account of the point being pulled through the esophageal wall and causing a mediastinal abscess.

It cannot be caught in the coil of the spring and pulled down into the stomach and allowed to rotate on account of the make of the pin, in which the coil part of the spring is covered and it could not be made to rotate.

The pin is of such a large size and the patient so young, the pin would cut the mucous membrane of the esophagus all the way down and then back again.

The only feasible thing to do would be to close the pin in place.

This was proposed by making a ring on the end of a steel spring wire large enough just to get the coil of the safety pin through. The ring being bent at right angles to the shaft of the steel wire, as shown in the picture.

Operation.

Patient was wrapped in a sheet so that it could not move the hands and feet. No anaesthesia used.

Head was drawn backward and chin elevated so as to allow the esophagus to lie in a straight line with the pharynx. Jackson's laryngeal spatula inserted and tongue and larynx lifted out of view so as to be able to see the opening of the esophagus.

A small twelve-inch esophagoscope with the ring was inserted into the esophagus. At the constriction of the esophagus, caused by the arch of the aorta, the pin was seen with the point and clasp upward.

The esophagoscope was passed down to the pin and then the ring pushed past the pin and pulled upward so that the spring part of the pin would pass into the ring.

With a pair of Jackson's mosquito grasping forceps the clasp of the pin was caught and by holding the ring stationary and pushing the pin downward the pin was closed. Then the esophagoscope was pushed down over the pin and the grasping forceps removed, at which time the esophagoscope, ring and pin were removed at the same time, the pin being in the ring at the end of the esophagoscope. Time required, five minutes.

Patient was returned to room in good condition, and ten minutes later was asleep. Pulse slightly accelerated from exertion.

Post-Operative Treatment.

Nothing by mouth for twelve hours. Patient allowed to go home next day. Temperature, pulse and respiration normal.

Conclusions.

No ether was given patient on account of liability to pneumonia; then, there is very little pain caused by the introduction of the esophagoscope, and the operation is of short duration.

The introduction of the esophagoscope seems a simple procedure, while it is in the hands of an experienced operator, but in the hands of the beginner numbers of cases have been reported in which the pharyngeal wall at the lower border and part of the esophagus has been denuded of mucous membrane.

Foreign bodies of the bronchi and esophagus are much more common than thought to be, as they pass by undiagnosed.

Chronic Infectious Arthritis.

About 100 cases are analyzed by Ralph A. Kinsella, St. Louis (Journal A. M. A., March 10, 1923). Twenty-four cases were chronic cases of arthritis which began as acute rheumatic fever. In nearly all instances the chronicity was dependent on neglect or inadequate treatment. All cases responded readily to salicylates, and the patients left the hospital "recovered," as far as arthritis was concerned. There were three cases of gout, two cases of

syphilitic arthritis, twenty-three cases of arthritis deformans, thirty-five cases of chronic infectious arthritis, in which there was complaint of chronic rheumatism involving one or several of the larger joints, and in all of which the inflammatory character of the arthritis and the roentgen-ray changes spoke for bacterial invasion, even though this invasion could not be demonstrated. The most significant features of this study have been: (1) The emphasis given to the part which circulatory changes and consequent nutrition changes play in the production of painful stiffening of the joints in which simple atrophy is the only evidence on roentgen-ray examination. (2) The importance of exhaustive physical examination in the search for infected foci. (3) The necessity of employing many forms of treatment, since no form was constantly successful and each kind of treatment was occasionally successful. (4) The importance of the last described group of male patients whose chief symptom is backache and who have spinal osteoarthritis, apparently associated with prostatic infection. (5) The lack of evidence that arthritis deformans is a focal infection.

EDUCATIONAL STANDARDS FOR PHYSIOTHERAPISTS.

The proper training of the physiotherapists of the future will have to be some two or three years of college education as a minimum, including biology, anatomy (including histology), physiology, bacteriology, chemistry and physics, so that we may be sure that they have sufficient knowledge of bacteriology, physiology, anatomy and other fundamentals. To this should be added one or more years of practical work in the hospital clinic with good instructors. All the necessary training in the technical procedures should be under the guidance of the medical profession. It would be a sad thing to banish the physiotherapist from the great medical centers where his influence and assistance are most needed.—R. L. Wilbur, California State J. M. 21:25 (Jan) 1923.

THE JOURNAL

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

THE EMORY CLINICS.

The Second Annual Reunion and Clinics given by the alumni of Emory University, will be held this year in conjunction with the venereal clinics under the auspices of the State Board of Health, June the 4th to 8th, inclusive. The clinics are open to everybody but we hope there will be a large attendance of the alumni. Make your plans now to attend! The alumni banquet will be held on Friday, June the 8th.

Below is an outline of the clinics, the subjects of same will be published at a later date. There will be some additions in the way of minor surgery, and bed-side discussion of the treatment of various diseases.

PROGRAM OF CLINICS FOR ALUMNI WEEK OF THE SCHOOL OF MEDICINE OF EMORY UNIVERSITY. MONDAY, JUNE 4

Registration at the Colored Grady Hospital, corner Butler and Armstrong Streets, and arrangements for transportation to the campus of the University.

10-11 A. M.—Inspection of the new Wesley Memorial Hospital.

11-12 A. M.—General Alumni meeting.
 12-2 P. M.—Alumni luncheon.
 2:30 P. M.—Address—Dr. George Bachman,
 Physiology Bldg.

TUESDAY, JUNE 5

Surgery.

8-10 A. M.—White Grady—Dr. T. C. Davison,
 Dr. T. P. Goodwyn.
 Colored Grady—Dr. F. K. Boland,
 Dr. F. G. Hodgson.
 Wesley—Dr. J. L. Campbell, Dr. W. S. Goldsmith.
 Ga. Baptist—Dr. L. S. Hardin, Dr. W. A. Selman.
 St. Joseph's—Dr. W. P. Nicolson, Sr.
 Davis-Fischer—Dr. E. C. Davis.
 Noble's San.—Dr. G. H. Noble, Sr.
 Piedmont—Dr. Floyd McRae.
 Spellman—Dr. B. H. Wagnon.

Neuro-Surgery

9-10 A. M.—Colored Grady—Dr. C. E. Dowman.
 Tuesday Medical Clinics.

10-11 A. M.—White Grady—Dr. R. T. Dorsey.
 Colored Grady—Dr. C. W. Strickler.
 Wesley—Dr. S. R. Roberts.

Deep Therapy and X-ray Diagnosis.

11-12 A. M.—Wesley—Dr. J. J. Clark.
 Colored Grady—Dr. G. C. Mizell.
 White Grady—Dr. J. W. Landham.
 Prevention of Asphyxia in the New Born.
 Colored Grady—Dr. R. A. Bartholomew.

Relation of Laboratory to Diagnosis.

12-1 P. M.—Colored Grady—Dr. Adams.

Pediatrics.

White Grady—Dr. F. M. Atkins.

Syphilis and Gonorrhea.

2-4 P. M.—Gray Clinic—Dr. E. G. Ballenger,
 Dr. W. B. Emery, Dr. O. F. Elder,
 Dr. B. C. Duncan, Dr. A. F. Caldwell.

Eye, Ear, Nose and Throat.

White Grady—Dr. J. R. Childs, Dr. L. C. Rouglin.

Venereal Diseases in Relation to Eye, Ear, Nose and Throat.

3-4 P. M.—Colored Grady—Dr. Dunbar Roy.
 Congenital Lues.

4-5 P. M.—Colored Grady—Dr. J. Yampolsky.
 WEDNESDAY, JUNE 6

Surgery.

8-10 A. M.—White Grady—Dr. H. R. Donaldson,
 Dr. O. B. Bush.
 Colored Grady—Dr. W. E. Person,
 Dr. J. F. Denton.
 Wesley—Dr. W. F. Shallenberger,
 Dr. E. G. Ballenger.

8-10 A. M.—Ga. Baptist—Dr. T. C. Davison.
 Davis-Fischer—Dr. O. F. Elder.
 Noble's San.—Dr. B. H. Wagnon.
 Piedmont—Dr. W. R. Holmes.

Medical Clinic.

Arthritis.

10-11 A. M.—Colored Grady—Dr. Theo Toepel.
 White Grady—Dr. C. C. Aven.

Diabetes.

11-12 A. M.—Colored Grady—Dr. J. B. Fitts.
 Wesley—Dr. J. E. Paullin.

12-1 P. M.—Colored Grady—Dr. Hal Davison.
 White Grady—Dr. M. R. Sims.

Syphilis and Gonorrhea.

2-3 P. M.—Gray Clinic—Dr. E. G. Ballenger,
 Dr. W. B. Emery, Dr. O. F. Elder,
 Dr. B. C. Duncan, Dr. A. F. Caldwell.

Colored Grady—Dr. L. M. Gaines.

Eye, Ear, Nose and Throat.

- 2-4 P. M.—White Grady—Dr. H. M. Lokey, Dr. B. McH. Cline, Dr. C. T. Key.

Foreign Bodies in Food and Air Passages.

Ga. Baptist—Dr. Murdock Eguen.

Proper Care of Acute Gonorrhea.

- 8-4 P. M.—Colored Grady—Dr. E. S. Ballenger.
Lues in Relation to Diseases of the Nervous System.

- 4-5 P. M.—Colored Grady—Dr. E. B. Block.

THURSDAY, JUNE 7**Surgical.**

- 8-10 A. M.—White Grady—Dr. G. W. Quillian, Dr. M. T. Benson.
Colored Grady—Dr. C. E. Waits, Dr. E. H. Greene, Dr. M. C. Pruitt.
Wesley—Dr. J. R. Barfield, Dr. W. A. Selman.
Ga. Baptist—Dr. C. W. Roberts.
Davis-Fischer—Dr. J. O. Kinard.
St. Joseph's—Dr. W. P. Nicolson.
Piedmont—Dr. C. E. Dowman.

X-ray.

- 8-10 A. M.—Colored Grady—Dr. W. F. Lake.
Fractures Ward Walk.
9-10 A. M.—Colored Grady—Dr. F. G. Hodgson.
Medical.
10-11 A. M.—White Grady—Dr. Arch Elkin.
Col. Grady—Dr. L. B. Robinson.
11-12 A. M.—Colored Grady—Dr. A. H. Bunce.
12-1 P. M.—White Grady—Dr. H. Bucknell.

Syphilis and Gonorrhea.

- 2-4 P. M.—Gray Clinic—Dr. E. G. Ballenger, Dr. W. B. Emery, Dr. O. F. Elder, Dr. B. C. Duncan, Dr. A. F. Caldwell.

Eye, Ear, Nose and Throat.

Ga. Baptist—Dr. G. D. Ayer.

Eye.

Colored Grady—Dr. F. P. Calhoun.
Cystoscopy and Gonorrhea in Women.
Gray Clinic—Dr. W. R. Holmes.

Pediatrics.

- 2-4 P. M.—Colored Grady—Dr. W. L. Funkhouser.

Toxaemia of Pregnancy.

- 4-5 P. M.—Colored Grady—Dr. J. R. McCord.

SYMPOSIUM.**The Medical and Surgical Abdomen.**

- 8 P. M.—Dr. C. W. Strickler, Dr. L. W. Childs, Dr. S. R. Roberts, Dr. E. C. Davis.

FRIDAY, JUNE 8**Surgical Clinics.**

- 8-10 A. M.—Dr. W. E. Yankee, Dr. L. G. Baggett.
Colored Grady—Dr. J. W. Roberts, Dr. J. A. McAllister.
Wesley—Dr. E. D. Highsmith, Dr. F. K. Boland.
Ga. Baptist—Dr. O. H. Matthews, Dr. D. Y. Sage.
Davis-Fischer—Dr. F. M. Sutton.

Fracture Clinics.

- 9-10 A. M.—White Grady—Dr. T. P. Goodwyn.

X-ray.

- 9-10 A. M.—Colored Grady—Dr. J. J. Clark.
Medical—Pediatrics.
10-11 A. M.—Colored Grady—Dr. R. G. McAliley.
White Grady—Dr. E. S. Byrd.
11-12 A. M.—Colored Grady—Dr. J. Funke.
12-1 P. M.—Colored Grady—Dr. H. C. Sauls.

Venereal Diseases.

- 2-4 P. M.—Gray Clinic—Dr. E. G. Ballenger, Dr. W. B. Emery, Dr. O. F. Elder, Dr. B. C. Duncan, Dr. A. F. Caldwell.

Nose and Throat.

Colored Grady—Dr. Dunbar Roy and Associates.

Eye, Ear, Nose and Throat.

White Grady—Dr. Guy Ayer and Associates.

Ga. Baptist—Dr. R. B. Ridley.

Treatment of Lues.

- 3-4 P. M.—Colored Grady—Dr. W. B. Emery.

When Is Gonorrhea Cured?

- 4-5 P. M.—Colored Grady—Dr. E. G. Ballenger.
Alumni Banquet—7 P. M.—Capital City Club.

NOTICE.

All graduates of the Medical Department of Emory University, which includes the graduates from Sou. Med. College, Atlanta College of Physicians and Surgeons, the Atlanta School of Medicine and the Atlanta Medical College.

We have had some difficulty in reaching all of our alumni, so that we are inserting a form to be filled out and mailed to Dr. J. W. Roberts, 436 Peachtree St., Atlanta, Ga., Secretary of the Alumni Association. Do this NOW!

The annual dues are \$2.00, so that if you have not paid your dues for the year 1922-1923, please let the secretary have your check for same as soon as possible.

Name

Address in full.....

.....

Class.....Date of birth.....

Internship

Post-Graduate work

Degrees

Specialty

Offices held, hospital connections.....

.....

Military service

Remarks:

.....

.....

THE BIG MEDICAL EVENT OF THE YEAR**INSTITUTE-CLINIC
EMORY UNIVERSITY**

June 4th to 9th

The Venereal Institute-Clinic in co-operation with Emory University Alumni

week this year will be the best yet held. The entire program of lectures has not been compiled, but the following is announced:

Every afternoon, beginning at 2 o'clock, clinics at Grady and Gray, covering thoroughly the venereal diseases in both races and sexes. They run for about 2 hours.

Tuesday, 3 to 4—Treatment of Gonorrhea—Prof. E. G. Ballenger.

Tuesday, 4 to 5—Syphilis—Prof. Emery.

Wednesday, 3 to 4—When Is Gonorrhea Cured—Prof. Ballenger.

Wednesday, 4 to 5—Syphilis and Its Relation to Nervous Diseases—Prof. Gaines.

Thursday, 2 to 3—Venereal Diseases and Their Relation to the Eye, Nose and Throat—Prof. Roy.

Thursday, 3 to 4—Demonstration of the Use of the Cystiscope—Prof. Holmes.

Thursday, 4 to 5—Gonorrhea in Women—Prof. Holmes.

Thursday, 8 p. m.—The Acute Abdomen, Symposium—Special Guests of the Fulton County Medical Society.

Friday, 3 to 4—Prenatal Care of the Syphilitic Mother and Her Child—Prof. Bartholomew.

Friday, 4 to 5—The Treatment of Congenital Syphilis in Children, with presentation of cases—Dr. Yampolsky.

Friday night the annual dinner at the Capital City Club and election of officers of the Alumni Association.

Saturday—Go as you please—Many clinics.

The entire morning programs are being arranged by Emory University, beginning at 8 a. m.

At 10 a. m. lectures will begin at the lecture room at Gray Clinic.

Every hospital in the city is preparing to take care of the visiting physicians. The surgeons will make special arrangements for you to witness any kind of operation you wish.

Monday will be a great day. The entire program will be at Emory University. Come Sunday, be here bright and early Monday, stay through the week, a great opportunity awaits you, all free and worth

hundreds (perhaps thousands) of dollars to you and your patients. In fact, you can not estimate the value in just money. It is an opportunity, and no physician in the Southeast can afford to stay away.

JOE P. BOWDOIN, M. D.,
V. D. Bureau, State Board of Health.

AN EMERGENCY NEED AND ITS REMEDY.

If our State Board of Health is to continue to meet the demands made upon it by our physicians and maintain its efficiency, more funds will have to be provided. The laboratory is now crowded with work. The painstaking care necessary to do proper work must not be relaxed. The natural increase in our population and the more general use of the laboratory for proper diagnoses have gone ahead day by day, but the money has not kept pace. The following taken from a recent publication bears out these statements:

"Bacteriological examinations made in 1918, 5,050; specimens examined in 1922, 12,635. Blood specimens examined for syphilis in 1918, 789; last year, 14,804. Samples of water examined in 1918, 346; the year 1922, 3,240. This gives us a total of work done in these three departments alone, dealing with diagnosis for physicians and keeping track of the public water supplies, of 6,185 examinations in 1918; examinations in 1922 were 30,679.

"The appropriation for 1919 was \$60,000; for 1923 it is only \$81,000. Can you imagine how Dr. Abercrombie has been able to increase the volume and efficiency of his work with this small amount of increase in cost? It must also be borne in mind that during this time three new bureaus have been added, Vital Statistics, Child Hygiene and County Health Work."

The physicians of our state should as a man rally to the cause of our State Board of Health and see to it that our members of the General Assembly are informed of the good work done and the imperative demand for an increase in the appropriation.

The time to do this is now.

TENTH DISTRICT SOCIETY.

The Tenth District Medical Society held its annual meeting at Milledgeville, Ga., April 11, 1923, as guests of the Baldwin County Medical Society. The meeting was held in the entertainment hall of the State Sanitarium. Dr. George R. Traylor, Augusta, Ga., presided. The following program was rendered:

Place of Meeting—Amusement Hall of the Georgia State Sanitarium.

9 to 10 A. M.—Registration.

10 to 12:30 P. M.—Scientific Discussion and Presentation of Clinical Cases.

1. Classification of the Insane—Dr. R. G. Swint, Supt. Ga. State Sanitarium, Milledgeville, Ga. Discussion opened by Dr. Harry Rubin, U. S. Veterans Hospital, No. 62, Augusta, Ga.

2. Chronic Invalidism—Dr. N. P. Walker, Clinical Director of the Ga. State Sanitarium, Milledgeville, Ga. Discussion by Dr. H. D. Allen, Jr., Dr. Echols, Dr. Swint.

3. Manic Depressions with Clinical Cases—Dr. G. L. Echols, Asst. Physician, Ga. State Sanitarium, Milledgeville, Ga. Discussion opened by Dr. H. D. Allen, Sr., Supt. and Medical Director of Allen's Invalid Home, Milledgeville, Ga. Discussed by Dr. H. D. Allen, Sr., Dr. Walker and Dr. Yarborough.

4. Dementia Precox, with Clinical Cases—Dr. Y. H. Yarbrough, Asst. Physician, Ga. State Sanitarium, Milledgeville, Ga. Discussion opened by Dr. L. P. Longino, Milledgeville, Ga.

5. Insufficient Treatment of Syphilis and Its Influence on Later Neuro-Syphilitic Developments: Clinical Cases—Dr. H. D. Allen, Jr., and Dr. John L. Oden, Milledgeville, Ga.

6. Neuro-Psychoses and the Ex-Service Man.

7. Advances in Neurological Surgery—Dr. Charles E. Dowman, Atlanta, Ga.

News Items

Dr. J. L. Campbell, Atlanta, Ga., State Chairman for the American Society for the Control of Cancer, has appointed Dr. G. Y. Moore, Cuthbert, Ga., chairman for the Third District.

County Chairmen.

Ben Hill County—Dr. W. P. Coffee, Fitzgerald, Ga.

Clay County—Dr. H. R. Ingram, Coleman, Ga.

Crisp County—Dr. A. J. Welchel, Cordele, Ga.

Dooley County—Dr. V. C. Daves, Vienna, Ga.

Lee County—Dr. H. T. Simpson, Smithville, Ga.

Macon County—Dr. C. A. Greer, Oglethorpe, Ga.

Quitman County—Dr. Loren Gary, Georgetown, Ga.

Randolph County—Dr. W. W. Crook, Cuthbert, Ga.

Schley County—Dr. B. L. Bridges, Ellaville, Ga.

Stewart County—Dr. J. M. Kenyon, Richland, Ga.

Sumter County—Dr. Bowman J. Wise, Plains, Ga.

Taylor County—Dr. S. H. Bryan, Reynolds, Ga.

Terrell County—Dr. J. T. Arnold, Parrott, Ga.

Turner County—Dr. J. H. Moore, Sycamore, Ga.

Webster County—Dr. C. G. Lunsford, Weston, Ga.

Local chairmen for cities over 5,000.

Dr. E. A. Russell, Fitzgerald, Ga.

Dr. J. A. Ward, Cordele, Ga.

Dr. J. T. Stukes, Americus, Ga.

Dr. J. G. Dean, Dawson, Ga.

Dr. T. N. Huff announces the opening of offices for eye, ear, nose and throat in the Hurt Building, Atlanta, Ga.

Dr. William T. Freeman announces the opening of offices at 746 Peachtree Street, Atlanta, Georgia. Practice limited to pediatrics.

Dr. M. T. Harrison announces his association with Dr. E. C. Davis in the practice of surgery and gynecology, 25 East Linden Avenue, Atlanta, Ga.

Dr. E. E. Murphy, Augusta, Ga., presented a paper on "The Terminology of the Cardiac Diseases—Both Present and Past" before the regular meeting of the Fulton County Medical Society, April 19, 1923.

Dr. John W. Daniel, Savannah, Ga., read a paper before the Clinical Society of Medicine, Atlanta, Ga., April 12, 1923.

Dr. R. C. Franklin, of Swainsboro, will resume his practice after taking a post graduate course in New Orleans.

The Georgia State Association of Optometrists held its 18th annual meeting at the Hotel Lanier, Macon, Ga., April 9th. Dr. J. H. Spratling, Macon, Ga., presided and Dr. R. C. Augustine, Decatur, Ill., president of the National Association, was the chief speaker.

The American Proctologic Society will hold its 24th annual meeting at Los Angeles, Cal., June 22 and 23, 1923. The profession is cordially invited to attend the public sessions—meeting place and headquarters, Hotel Alexander. Clinics will be in Los Angeles County Hospital.

NOTICE!

The Salt Lake County Medical Society is arranging for the entertainment of visitors who may be able to stop over enroute, either going to or coming from the meeting at San Francisco. The stopover here can be made inexpensive. Our Society has already appointed committees to greet and city and, if possible, some of the surround-

ing territory, which may include wonderful mountain drives; a visit to Saltair, which is situated on Great Salt Lake; and a visit to the great copper mines in this vicinity.

Large parties intending to make this stopover are requested to give us notice as far in advance as possible as to the number in party and length of time of stopover. Any inquiries relative to this matter may be directed to Secretary Dr. Floyd F. Hatch, Desert Bank Building, Salt Lake City, Utah.

OFFICIAL CALL.

To the Officers, Fellows and Members of the American Medical Association:

The seventy-fourth annual session of the American Medical Association will be held in San Francisco, California, from Monday, June 25th to Friday, June 29th, 1923.

The House of Delegates will convene on Monday, June 25th.

The Scientific Assembly of the Association will open with the general meeting held on Tuesday, June 26th, at 8 p. m.

The various sections of the Scientific Assembly will meet Wednesday, June 27th at 9 a. m. and at 2 p. m. and subsequently according to their respective programs.

Communication.

Dr. Allen H. Bunce, Med. Assn.,
Healey Bldg., Atlanty, Ga.

Dear Sir:

Would you kindly publish the following in your next issue?

A further study of hydatidiform mole has been undertaken at this hospital especially in regard to the frequency of malignancy following this condition. An attempt is being made to collect case reports from outside physicians. Cases reported by physicians will be given due credit in any literature published.

Address communications to

ROBERT B. KENNEDY, M. D.,
Chicago Lying-in-Hospital,
Chicago, Ill.

The Resourceful General Practitioner of Modern Medicine.

Frank Billings, Chicago (Journal A. M. A. Feb. 24, 1923), says that the time has come for plain statements in regard to modern medical practice, with the purpose of brining the public and the members of the medical profession as a whole back to good common sense views. It is his purpose to attempt to show how the general practitioner may continue to occupy the important place in the field of practice which was his until recently. He says that in their work, not all general practitioners are resourceful and sure of themselves. This fault is due, in some instances, to inadequate early training, but in a majority of men it is due to laziness and failure to take advantage of the opportunities afforded all physicians. The physician who makes all possible use of his daily clinical opportunities learns something new and useful every day of his professional life. Naturally, this daily clinical study develops the powers of observation and manual dexterity in physical examination and in treatment. The knowledge which this ever increasing experience affords is refined and stabilized by purposeful reading of standard textbooks and periodicals, by association with fellow practitioners and by the discussion of papers read before medical societies, and by writing papers on subjects which the physician's daily clinical observations justify. Membership and active participation in the work of the county medical society is of great educational benefit to the physician. It affords personal contact with fellow practitioners in the courteous discussion of medical subjects and professional problems, promotes mutual respect and good will, and is a potent factor, conducive to increased self-respect and self-reliance on the one hand, and to a decrease in the size of the hat, if imaginary megaloecephaly makes one a nuisance to his fellows. Concisely written reports of interesting clinical observations presented before medical societies and for publication are a splendid means of self-education, and are justified

because they furnish a valuable addition to medical literature. Diagnosis is the most important factor in the practice of medicine. With due regard for the value and need of all the splendid ultra scientific laboratory and instrumental methods of physical and functional diagnosis in investigatory medical work, they are needed in the routine clinical care of not to exceed 20 per cent. of all the patients of any urban or rural community. Unfortunately, many lay people have been made to believe and apparently a large number of physicians think that the routine application of the ultra scientific methods of diagnosis is necessary in the majority of cases. The fact is that the diagnosis can be made in fully 80 per cent. of all cases by a resourceful general practitioner who will efficiently use his brain, special senses, hands and an always available simple and inexpensive laboratory and instrumental equipment. The history of the past and present condition of the patient is one of the most important, if not the most essential, factor. A majority of practitioners do not make written records of their patients; these are absolutely essential to accuracy in diagnosis and efficiency in practice. The conscientious practitioner will make a careful, general physical examination of practically all patients who seek his services. An occasional patient with a slight ailment, and especially those with slight injuries or lesions requiring surgical treatment, are exceptions. Daily practice in technique and judgment is the program which every physician must follow to become a skilled diagnostician. The practitioner can gain much by observing others at work in organized clinics or by taking postgraduate courses in diagnosis, when these are available; but the efficiency of the practitioner in diagnosis is mainly dependent on his own industry and determination to make the most of his own clinical opportunities. There is a growing custom in urban practice for general practitioners to have the routine laboratory examinations, such as urinalysis, blood estimations and other simple tests, made and the re-

sults interpreted for them at the numerous available commercial laboratories. In Billings' opinion this is a great fault in practice; it would be quite as rational for the practitioner to depend on available organized clinics for the physical examinations and diagnosis of patients. For the few patients who require laboratory or instrumental tests which involve special knowledge and technical skill in their application, such as blood chemistry, serology, bacterial cultures, elaborate blood counts, electro-cardiography and efficient roentgenology, the practitioner should make use of the excellent commercial laboratories, public clinics and available state, county and municipal public health laboratories. Billings believes that the preservation of the general practitioner, as the most important factor in the field of practice, is dependent, chiefly on himself. He must keep abreast of the advance of modern medical knowledge and practice, chiefly by his own efforts. If he strives to improve and help himself he will be successful; will justify his importance in the medical field, and will attract the ill and injured to his door because of his professional individual superiority as compared with men in narrower fields of practice, alone or in public or private groups. The necessity for the preservation of the general practitioner in the city and in rural districts, for the general public good, justifies and demands that the organized medical profession should assume leadership in educating the public to understand and comprehend the need of hospital centers, including diagnostic facilities in every community financially capable of self-support.

A Simple and Rapid Test For Albumin and Other Urinary Proteins.

A test has been developed by William G. Exton, Newark, N. J. (*Journal A. M. A.*, Feb. 24, 1923), that has been thoroughly tried and found exceedingly satisfactory for both qualitative and quantitative testing for albumin in urine, with a reagent consisting of a 5 per cent. solution of sul-

phosalicylic acid and 20 per cent, sodium sulphate. The test appears to be so reliable that checking up with other tests is rarely, if ever, necessary. The reagent is highly acid, approximately equivalent to tenth normal hydrochloric acid, and so thoroughly loaded with salt that, when added to an equal volume of urine, a mixture is obtained that is quite uniform in specific gravity, hydrogen ion concentration and salt content, irrespective of the physicochemical constants peculiar to the particular urine tested. A liter of the reagent is made by dissolving 200 gm. of sodium sulphate (crystals) in from 700 to 800 c.c. of distilled water. After cooling down to about 35 C., 50 gm. of sulphosalicylic acid is dissolved by stirring and without further heating, and enough water is then added to make 1 liter. The reagent is not sensitive to light, and keeps indefinitely. The test is performed by mixing equal parts of urine and reagent, and warming. Even the warmth of a match suffices. Boiling does not spoil the test, but is unnecessary. Albumin-free urines so treated give a perfectly clear, transparent mixture; albuminous urines, a clouding with the degree of turbidity directly proportionate to the concentration of albumin.

The Diagnosis of Conditions Causing Backache.

The causes of backache are tabulated by George F. Straub, Honolulu, Hawaii (*Journal A. M. A.*, March 10, 1923), as follows: (1) extrinsic (remote): gynecologic; genito-urinary; general abdomen; nervous system; constitutional; (2) intrinsic (direct): congenital; static; traumatic; inflammatory; neoplastic. As to treatment, the genito-urinary causes of backache must be left to the urologist. Those due to toxemias will generally yield to treatment of the focus, plus general measures. Backache in connection with anomalies of the lumbosacro-iliac apparatus is opening up a vista regarding prophylaxis, while the treatment is essentially of an orthopedic character. Pain in the back due to

weak feet disappears like magic with attention to the fundamental pathologic condition. The lumbago of a myalgic character; once it has become chronic, is amenable to treatment only by proper massage of the affected part of the muscle, vigorously applied to strong muscles, but gently to weak muscles, and above all by injections of saline solution, with or without procain, into the individual nodule. Attention to the general condition of all patients is of equal, if not superior, importance. But above all there must be assured the protection of a definite diagnosis.

Blood Transfusion by the Citrate Method in Hemorrhages of the New-Born.

Frederick H. Falls, Iowa City (Journal A. M. A., March 10, 1923), makes a report on the intravenous injection of citrated blood, using the external jugular vein for that purpose. The method pursued and the instruments used are described in detail. There were fourteen cases in the series. The seriousness of the hemorrhage varied from a slight capillary oozing from a mucous membrane to a severe anemia which resulted from extensive bleeding from the cord, or from a melena. In many of the cases, various remedies had been tried before transfusion was undertaken, such as retying and sewing the umbilicus in cord hemorrhages, or the giving of various other forms of coagulant, such as blood coagulants, horse serum, or human serum under the skin. These measures had failed to produce the desired effect, and so transfusion was resorted to. The operation was followed by recovery in all cases, but in a few it was necessary to repeat the transfusion.

Postinfluenza Chronic Pneumonitis.

It is commonly stated that influenza predisposes to pulmonary tuberculosis. This may be true, says Francis H. McCruden, Boston (Journal A. M. A., March 3,

1923); but he also asks whether it is not possible that this belief is due to the confusion of tuberculosis with the postinfluenzal nontuberculous, pulmonary conditions described in this paper. We all see cases of pulmonary disease in which the tubercle bacillus cannot be found in the sputum, and cases in which physical changes characteristic of pulmonary tuberculosis cannot be found in the lungs, which are, nevertheless, diagnosed as possible, or even probable, pulmonary tuberculosis. But in the case of a patient giving a history of severe influenza and pneumonia, preceded by good health and followed by chronic pulmonary disease, a diagnosis of pulmonary tuberculosis should not be made unless either physical or roentgen-ray findings show the definite characteristics of pulmonary tuberculosis, or the sputum shows tubercle bacilli. It is possible that pulmonary tuberculosis may attack a person suffering from this postinfluenzal pneumonic condition, so that the two conditions may be present in the same patient, or that pulmonary tuberculosis may immediately follow a severe case of influenza. McCruden reports four cases to illustrate the points made.

Simple Goiter As a Result of Iodin Deficiency.

The results obtained so far by J. F. McClendon and Agnes Williams, Minneapolis (Jour. A. M. A., March 3, 1923), have all fallen into line with the idea that there is an inverse ratio between the amount of iodine in surface waters or those of shallow wells or springs, and the distribution of goiter. The problem is discussed in detail. It is not intended to intimate that there is enough iodine in drinking water to prevent goiter. It seems more probable that the iodine in water is merely an indication of the iodine in soils which come in contact with this water, and that the iodine in soils is concentrated by the plants growing in the soils, and in that way the population over a given area receives iodine through the food.

Is the Action of *Bacillus Acidophilus* a Strictly Bacteriologic Phenomenon?

Experiments were made by Nicholas Kopeloff, New York (Journal A. M. A., March 3, 1923), to determine how milk fermented with *bacillus acidophilus* relieves constipation. The following points are said to have been established: (1) The action of *bacillus acidophilus* is not a physical phenomenon, since patients receiving sterile milk were not relieved of constipation. (2) The action of *bacillus acidophilus* does not appear to be a strictly chemical phenomenon, since patients receiving pasteurized *bacillus acidophilus* milk were not relieved of constipation. (3) The action of *bacillus acidophilus* appears to be essentially a bacteriologic phenomenon, since patients were relieved of constipation by the ingestion of milk fermented by *bacillus acidophilus*. (4) Relief from chronic constipation has persisted for six months after the ingestion of *bacillus acidophilus* has been discontinued. (5) Viable *acidophilus* organisms in appreciable numbers have been recovered from the feces of patients months after the ingestion of *bacillus acidophilus* milk. The observations reported are being continued.

Progressive Osteomyelitis of the Frontal Bone.

In the case cited by H. B. Lemere, Omaha (Journal A. M. A., March 3, 1923), the pathologic diagnoses were: osteomyelitis of the frontal bone, with contiguous involvement of the parietal and squamous portion of the temporal bones; frontal sinus infection; empyema of the sphenoidal cells; basilar meningitis, and subarachnoid abscess in the region of the left seventh and eighth nerves. The primary cause of death was infection of the frontal sinuses. Contributory causes of death were osteomyelitis of the frontal bone, and basilar meningitis. The case is reported in detail and the literature is reviewed.

Alimentary Leukocytosis in Eighty Normal Men.

This study was undertaken by Henry M. Feinblatt, Brooklyn (Journal A. M. A., March 3, 1923), for the purpose of investigating the normal leukocyte curve following the ingestion of one glass of milk after a period of fasting. Experiments with reference to their postalimentary leukocyte curves were conducted on eighty presumably healthy medical students. After five hours of fasting, a white cell count was made, then a glass of milk was drunk, and thereafter the leukocytes were counted at intervals of one-half hour. In every instance, some degree of leukocytosis followed the administration of the test meal; in other words, the *crise hemoclasique*, as judged by the postalimentary leukocyte curve, did not once occur in a normal person. There was considerable uniformity in the curves, and the difference between the two extreme variants was not great. The composite curve of normal postalimentary leukocytosis, as obtained by averaging the figures on the eighty normal subjects, gave counts of 7,379 white cells before the meal, and 8,856, 9,762, 9,779 and 9,191 white cells one-half hour, one hour, an hour and a half, and two hours, respectively, after the meal. From the studies reported, it appears safe to conclude that the normal response to the conditions of Widal's liver function test is uniformly one of leukocytosis.

Duodenal Motility.

The radiographic observations following the direct injection of barium into the human duodenum are reported on by Homer Wheelon, Seattle (Journal A. M. A., March 3, 1923). Barium in quantities of from 20 to 60 c.c. may be injected directly into the duodenum without causing distress, the stomach and duodenum having previously been emptied of their contents. The first observed movement of the barium following injection into the duodenum is a more or less complete division of the mass at the point of greatest distention. Following the primary partial division, barium is

usually passed along both directions of the duodenum, the central portion being delivered to the upper duodenum or cap, the distal portion to the jejunum. Reverse movements of barium sooner or later result in the complete filling of the cap, at which point barium may rest for a long period of time. Following distention of the cap by reverse movements, barium is passed forward by progressive movements which, at times, carry material through the point of original duodenal distention to lower segments. Barium may be delivered from the point of distention to the stomach as the result of reverse movements. In the majority of instances, barium is passed into the stomach only after several injections of the duodenum. Rhythmic segmental and pendular movements of barium occur in the duodenum. Barium tends to rest at the point of injection—inferior flexure. This region is the usual point of injection. In one instance of jejunum injection, marked reverse movements resulted in the lodgment of barium in the cap, stomach and inferior flexure.

The House Fly.

The habits of the house fly are such that knowing them is sufficient to make one wish never to see a fly again. If a community knows these habits they will do everything in reason to eradicate the fly. Starting with this premise I wrote articles for the paper detailing these habits, especially the more pleasant ones such as vomiting on food, carrying offal, etc. The disease carrying propensity of the fly was not dwelt upon. The public having been "sort of fed up" on this side of the question.

The following article, which appeared in the paper will, I think, start people thinking about the uncleanness of the fly.

The dirtiest and to us the most destructive enemy to the State of Georgia is the plain ordinary house fly. The boll weevil is as a plain tramp to a gang of yegmen compared to this thing. It breeds in filth undescrivable—horse manure is its favorite and least repulsive incubator, untended

septic tanks not its most repulsive. It is covered with fine hairs and bristles and with some of this material clinging to it flies straight to your unscreened kitchen—unless perhaps, it stops for a cocktail at your uncovered garbage can. Having its hors d'oeuvre in the kitchen and wishing to hasten its delectable freight on its way to your mouth it alights on your food. Like the buzzard it does not retain the less cleanly portions of its food—it pukes it on yours.—Monthly Report, Board of Health, Brunswick.

The Standardization of Biological Stains.

On March 2nd at the Cremists' Club in New York City, there was held a meeting of the executive committee of the commission of standardization of biological stains. The members of this committee are: H. J. Conn, Geneva; F. B. Mallory, Boston; L. W. Sharp, Ithaca, N. Y.; J. A. Ambler, Washington, D. C., and S. I. Kronhauser, Louisville, Ky. The meeting was also attended by C. H. Herty to represent the Synthetic Organic Chemical Manufacturers' Association, and by F. P. Garvan and W. F. Keohan to represent the Chemical Foundation. The meeting is a matter of interest to everyone in the medical profession.

All physicians realize the need of dyes for staining specimens in the laboratory diagnosis and investigation of disease. It is not perhaps so generally realized that the dyes used for this purpose, in order to give constant results, must be of very precise chemical composition; and yet it is a very difficult matter for either the chemist or the biologist to control their composition. Before the war all stains were imported from a single German firm. This firm did not manufacture stains, but bought textile dyes in batches of considerable size, and after some preliminary testing bottled them and sold them under its own name to the biological laboratories of the world.

When the war broke out the American laboratory was deprived of this foreign source of stains. After the pre-war stocks

already on hand had given out, much difficulty was experienced in getting stains of the quality necessary. The Society of American Bacteriologists began an investigation of American-made dyes that were being sold as biological stains. The results of this investigation were so promising that it proved possible to secure the assistance of the National Research Council thru whose agency a co-operative investigation was arranged among the members of several national societies. Recently the work has been organized under a special commission independent of the Research Council but still representing the different national societies that were co-operating in the earlier work.

At the executive committee meeting of this commission just held, the very encouraging results of the work were reported. It was shown that already the stains available in America are in practically all cases as good and sometimes better than the best of the pre-war stains. The most important fact brought out at this meeting was that while the pre-war stains were standardized only in an empirical way, by buying large batches without knowing the exact composition of the dye, they must now be standardized on the basis of pure chemicals.

The reason for this is because it is proving that in some cases the impurities present in the pre-war stains were very necessary. Sometimes these impurities were other dyes and sometimes supposedly inert materials like dextrin. In all such cases the task plainly before the commission is to find out what the impurity is which was responsible for the good staining qualities of the impure product. Then in the future the users of stains must demand that these impurities be present, not as impurities, but as intentionally added ingredients. When this has been done and the products are labeled and used accordingly, the American stains will become standardized in a true sense of the term.

Very shortly the commission will begin issuing certification of definite batches of stain that it has found satisfactory. These

stains will be put on the market under a special label bearing the name of the commission. Users of stains must be on the lookout for products bearing this label.

Buyers of stains must also watch for spurious imitations of this label put out by unreliable concerns. Any form of certification appearing on a stain label not bearing the name of the commission is merely a certification by the manufacturer or dealer himself, and as such has no value.

The Chemical Foundation has very kindly agreed to support the work of the commission financially.

The Power of Observation. No men need alert minds more than those who practice medicine. The following recent actual occurrence in one of our eastern counties furnishes an illustration: A doctor was called out into the country by an older practitioner to assist him in a confinement case. "Both of the baby's feet are out of the vagina, but I can't deliver

Announcement

Dr. S. S. Marchbanks

527 - 28 - 29 - 30 - 31 - 32 - 33
Volunteer State Life Bldg.

Chattanooga, Tenn.

Announces to the profession the
installation of a

Deep Therapy X-Ray Apparatus

For the treatment of all deep-seated malignancies. Practice limited to X-Ray Diagnosis, Deep X-Ray Therapy and Skin Diseases.

it," was the message. "Come and see if you can help me." After the consultant had arrived and examined the case, he looked up at his friend and remarked, "Why, doctor, both of these feet are right feet." The patient had twins.

Recognize Your Limitations. The above story also shows the value of consultation. The advice given by an old doctor to his nephew just starting to practice was, "Don't be afraid to call for a consultation. Whatever is best for the patient is best for you." In some cases physicians should go a step further than a consultation and refer cases outright to those whom they know are much better qualified to treat them. Medicine of today is so complex that specialists are the natural sequence. Although a diploma and license legalizes one to practice all branches of medicine and surgery, the wise young doctor will recognize his limitations and will not attempt to handle a case or perform an operation which he knows his experience does not warrant.

BOOKS RECEIVED.

THE SURGICAL CLINICS OF NORTH AMERICA.

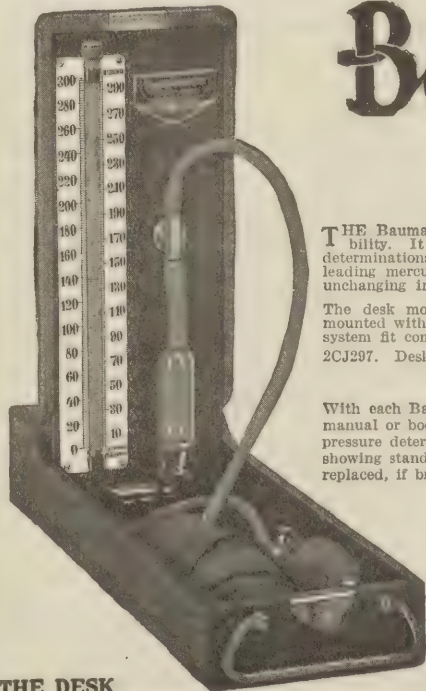
Philadelphia Number February, 1923.

The Surgical Clinics of North America (issued serially, one number every other month). Volume 111 Number 1 (Philadelphia Number February, 1923) 300 pages with 105 illustrations. Per Clinic year (February, 1923, to December, 1923). Paper, \$12.00 net; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Vacancy: Interne Eye, Ear, Nose and Throat service Grady Hospital. Good clinical and operative experience. Appointment in June for 18 months. For information write F. P. Calhoun, 21 Doctors Building, Atlanta, Ga.

OBITUARY.

Dr. J. L. Dabney, age 60, Columbus, Ga., died March, 1923, in Panama City, Fla.



**THE DESK
MODEL BAUMANOMETER**

Baumanometer

SOLD TO YOU ON EASIEST TERMS

\$2.00 BRINGS IT TO YOU

THE Baumanometer is an instrument of precision, accuracy, marked simplicity and proven reliability. It is a distinctive instrument that will give you thorough satisfaction in making blood determinations year in and year out. Its quick, accurate and efficient performance makes it the leading mercury sphygmomanometer. You will find it free from mechanical defects and absolutely unchanging in accuracy. Complicated parts are conspicuous by their absence.

The desk model Baumanometer is supplied in solid American walnut case, richly finished and mounted with polished nickel fittings. The manometer is calibrated to 300 mm. Cuff and inflation system fit compactly into the case, which measures 14½ x 4½ x 2½ inches.

2CJ297. Desk Model Baumanometer..... **\$32.00**

FREE MANUAL

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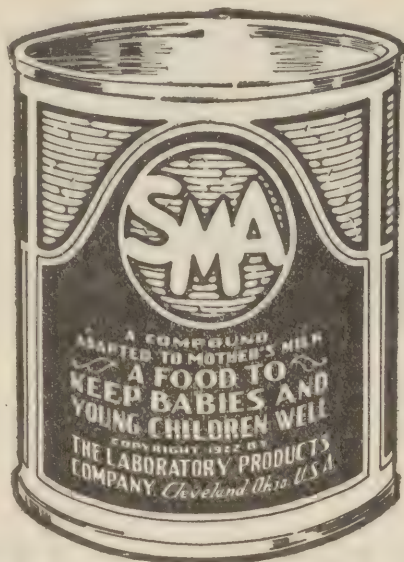
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PRESIDENT'S ADDRESS*

J. M. Smith, M. D.
Valdosta, Ga.

Gentlemen of the Association:

This, as you know, is my first opportunity to address the membership of the entire association. If in doing so I should neglect at once to acknowledge the gracious favor whereby I have been privileged to enjoy the honor and distinction of serving as your president for the past year, I would be conscious of having committed a grievous error. The task of making known to you my gratitude, however, while not unequal to my emotions, is in excess of my power of expression. When I pause to think of the great and good men who have preceded me in this exalted station, and of the number among you who could have borne the distinction with such becoming ease and with so great credit to the profession, I am aware how vast is the measure between what one may feel and what one can express in words. Finding myself overwhelmed by your kindness and yet limited in the means by which to acquaint you with that fact, I am constrained to say, with Shakespeare, "Beggar that I am, I am poor even in thanks." Nor shall I be content to acknowledge my sense of obligation to you in mere words. I cherish the hope rather, and the ambition, that in some way, in deeds, to the association as a whole, and to the members individually, I may render some useful service. To that end, and with my sincerest thanks, I pledge to you my loyal friendship and devotion.

I confess to you that, anticipating this occasion, I have seriously considered what I might say worthy of your silence and attention. There is always the temptation, in speaking to members of the profession, to

talk shop. And certainly the field of our endeavors is rich in material for such a theme. In its unflinching progress, medicine has touched every condition and emotion of men, both as individuals and as organized society. While it has not paraded its virtues, nor denied its faults, it has, I assert with confidence, kept apace the times, and has been able, as one of the essential aids to progress, to render a distinct and invaluable service to mankind. Indeed, had there been no substantial service which it was both able and willing to render, the profession would long since have been swept away along with witchcraft, sorcery and soothsaying. While the popular notion is that medicine has made its long and rapid strides within the past generation, and, while it is true that in the adaptation and perfection of process and method there has been remarkable progress within that period, yet it must be remembered that great foundations have long been in place and that many of our latter-day attractive superstructures rest with whatever security they have upon them. Merely to mention such names as William Harvey, Edward Jenner, Oliver Wendell Holmes, Joseph Lyster, Louis Pasteur and Crawford W. Long, is to remind you that the science of medicine has long been in concentrated hands, and that its great achievements, however recent, reach back into a past abundant in sacrifice and labor, fruitful in enduring service to mankind, resplendent in honor to the profession.

Logically enough, every great achievement is associated in the mind with sacrifice or suffering or labor or peril or death. All things teach us that not the least fraction of eternal good may be had on a wager; nor the slightest ray of immortal splendor

*Address of the President of the Medical Association of Georgia, Savannah, Ga., May 2-4, 1923.

may be constrained by a turn of chance. Were the inexorable laws of nature otherwise, then the laurels of fame might rest eternally upon the brow of shame, and the lights of immortal glory shine upon dishonor. All experience admonishes and the highest laws of our own minds confirm the already demonstrated fact that one cannot garner sublime truths otherwise than by patient and concentrated effort. Many are the instances where the cost marks of our most cherished achievements are set down in blood. The history of the progress of medicine does not differ in this regard from the history of the progress of other sciences. Fortunately, from the day of Hippocrates, the great Greek physician, and that of Descartes, who devoted himself to its study for the sake of humankind, the profession has ever numbered in its ranks men of great genius, and great hearts. While the lofty ideals and the splendid conception of ethics entertained by the leading men of the profession in its early days have sometimes suffered neglect, they have never lacked able and learned exponents, and the men who have held to the idea that the medical profession was not simply a way of earning a livelihood but a means of service to man and to mankind, are the men who have given to the world medicine's most worthy achievements. It is they who have endured patient toil. It is they who have kept vigil if perhaps some new and helpful truth might be revealed. It is they who have paid in physical exhaustion and mental fatigue, yes, in blood and in death, for precious truths which now seem but simple facts known to all men.

I have called attention thus briefly to some of the noteworthy achievements of the profession, not with the view primarily to pronounce any encomium upon it, or upon its great names, but that I may thereby emphasize what I conceive to be our proper attitude to the work we have chosen and to the public we serve.

My own opinion is that every practitioner of medicine, in whatever branch, will be found in true relation to his friends and

neighbors, his clientele and his community, his government and his church, provided his love of the profession has led him to appreciate it as the means whereby he is enabled to render useful service to his day and generation. No man was ever requited for his labor who did not put something into his service which money could not buy. It is obvious that one cannot put into his work that unpurchasable quality unless he does esteem it as worthy of his utmost endeavor. If he does so regard it, then no part of his task may be considered trivial or beneath his performance. And here let me admonish the members of this association that there rests upon us, severally and collectively, the obligation to lend every aid and encouragement to this and to the national association. If the medical fraternity is to maintain its high standards; if it hopes to search out yet other simple but hidden truths for the benefit of mankind; if it would take even higher grounds in the realm of service and ethics than has yet been reached, then it is imperative that these associations function. The practical good resulting from these meetings of the association cannot be seen at a close view nor properly estimated even after the lapse of time. Whatever else may come of them, it is here every man brings his best self and his most valuable wares in thought and experience to cast them with the common lot of all, and from this select aggregate of selves and wares there emanates an inspiration of which no worthy physician can afford to deprive himself and which none can have except by affiliation and contact with the association. It is here we test and hold on to the things that are good. It is here we bury petty differences, encourage a spirit of wholesome good will and fraternal fellowship. It is here we foster that standard of ethics essential both to the profession and to the public it serves. It is difficult to understand why any worthy member of the profession in this State should forego the pleasure and the positive good resulting from membership in this body.

I can scarcely imagine a sadder plight than befalls him who must of necessity pur-

sue a labor in which there is no love. One so unfortunate may eke out the means for existence; indeed, he may amass a fortune; but not yet has unwilling and unconcentrated effort revealed any great truth or performed any splendid service. To believe that one's work is dignified and noble; that in it there is the balm of Gilead and the oil of joy for tears; to believe that it is inherently right, and that its results shall ultimately be good, is to make sure that one's labors shall not be in vain. The "Father of His Country" cannot be regarded as the greatest of generals nor the wisest of statesmen; and yet, by common consent, he is "first in war, first in peace, and first in the hearts of his countrymen." The explanation lies in the fact of his constant devotion to his country. So completely did he link his own fortunes to those of young America, and so devoted was he to its every interest, that his memory is to us and shall be to future generations, like the shadow of a great rock in a weary land. The greatness and the character of Robert Edward Lee was in no way more clearly reflected than in his devotion to the cause in which he had enlisted. It is related of him that on one occasion he was to pass through a small town in Virginia where a Northern lady and her little daughter were on a visit. They were eager to see the man who directed the cruel armies of the South. Their conception of him was that he was a wicked and brutal traitor. As he approached the place where they were waiting, the little girl ran out on the sidewalk to get a good view, and as the great general passed on his white charger, he gallantly raised his hat, bowed and smiled. The child, conquered by his simple grace and dignity, ran back and said eagerly, "Mother, don't you wish he was ours?" There is yet another illustrious example of consecrated devotion to the service to others.

While the story is not yet complete, I am confident that history will, in due season, dedicate to Woodrow Wilson a page as

bright and clean as was ever ascribed to mortal man. Calumny and envy may have halted his program, but they are powerless to break his purpose. Hatred and jealousy may have wrecked the execution of his plans for the temporal salvation of a world in the throes of war, but they are powerless to stay the tide of moral force which he has set in motion. If sinister attacks have shortened his days, they have likewise served to brighten and to lengthen his immortality.

I am aware that it is not given to most men to play the leading part in great events. The great majority of us are called upon to act our parts behind the scenes and in the end to be remembered no more. That fact, however, should not abate our devotion nor diminish our efforts in a noble profession. I recall to mind that in the small city where as a boy I spent many happy moments of leisure, there was a blacksmith whose presence was a benediction to every patron of his humble craft. He was proud of his profession. In doing well a useful work he was conscious of rendering a service to his fellows. It was his delight to fashion with superb skill every iron brought to his forge. In every stroke of his hammer was that unpurchasable force which inheres in honest and devoted work. I fancy that he could wish no heaven so replete in happiness as one where he could again take his place between the anvil and the bellows and there, in honest strokes, round out eternity in full measure of devotion to an honorable vocation.

Fellows, I felicitate and congratulate you upon the fact that you are engaged in a work wherein there is abundant opportunity for ennobling service. Nor would I forget those of our fraternity whose labors are done. I should delight, if I could, to pay a just tribute to them. But that were impossible. Genius has not yet fashioned a fitting memorial to that man, whether renowned or obscure, who holds in sacred trust his every talent for the service of mankind.

SOME TENDENCIES IN MODERN MEDICINE*

Louis M. Warfield, M. D.,
Ann Arbor, Mich.

It is with a feeling of pleasure which I cannot adequately express in words that I stand before you today, to address you. Some of you have known me since I was a boy in short pants; others know me as a member of the profession in this city for a brief time; others may only know that I am a native of this city. Although I have left it for work in other fields, yet it is dear to me as my birthplace and where I passed my boyhood days.

It has been twenty years since I hung out my first shingle in Savannah. Much has been crowded into those years. Many radical changes have taken place in the field of Medicine and many new procedures in diagnosis and treatment of disease unknown then have become the common property of all. To some of these changes I want to call your attention at this time.

I have chosen as the title of my remarks "Some Tendencies in Modern Medicine". The title does not tie me down too rigidly, but leaves me free to express some thoughts which I have long had in mind, yet gives some inkling of what I might say.

It seems to me that the most significant tendency in modern medicine is the undue importance attached to the laboratory side of medicine and to the use of so-called instruments of precision. Medicine can never be an exact science in the sense that mathematics is an exact science, yet it seems that some would place it on such a basis through the use of various laboratory methods. In spite of all our boasted science, medicine is and must remain largely an art when applied to the handling of sick people. The laboratory workers, with their more or less clean-cut results, have swept the doctor off his feet. I think it is fair to say that the majority of doctors were led to believe that the laboratory was the final word in diagnosis. From that point of view to the next—letting the laboratory make the diagnosis—

was but a step, and many took it. So that, if the laboratory reported sputum negative for tubercle bacilli, the patient did not have tuberculosis of the lungs, but had chronic bronchitis. If the Widal reaction was negative, the patient did not have typhoid fever. If diphtheria bacilli were not found in cultures from a throat smear, the patient did not have diphtheria. If the Wassermann reaction was negative the patient did not have syphilis. Examples could be multiplied, showing how the precise laboratory methods actually took the place of careful history-taking and examination of the patient and, moreover, fostered mental laziness in the profession. The laboratory workers said they could diagnose disease, by the precise methods they used, much more accurately than the practitioner could. Let the doctor send the specimens in certain kinds of containers, and within twenty-four hours the report would be telegraphed to him. The cry was "come one, come all and let the laboratory tell you what is the diagnosis of your patient's malady." How much harm has been done no one can say. There must have been a great deal, for in my own limited experience I have seen many cases of tuberculosis pass from incipient to far advanced cases because the laboratory could not demonstrate the tubercle bacillus in the sputum. I have seen syphilis go untreated because of a negative Wassermann reaction in the face of history and evident physical signs.

We have tried to make of the human body a machine which we think should respond as a machine responds when certain procedures are done to it. But the body, while likened to a machine, is not a machine whether we wish it to be or not.

We do not have to look far to find the reason for the undue importance of the laboratory. To the laboratory or, as we are accustomed to call it, to the scientific side of medicine we owe most of the advances which have been made in the past twenty-five years and it is not remarkable that those who pushed out into the unknown, bent upon wresting secrets from Nature, should

*Address delivered by invitation before the Medical Association of Georgia, Savannah, Ga., May 2-4, 1923.

have felt that their work was the really important side of progress in Medicine. No one for a moment will deny that without the researches in the various laboratories where a patient was never seen, we should not now have to our everlasting credit some of the most important advances ever made in medicine. I have a profound admiration for the laboratory researches. I am sure that I recognize all the real good which has come from them, but I feel that in the over-enthusiasm of the laboratory workers all have suffered more or less. Yet the laboratory worker surely should not receive all the blame. He was zealous; he made statements not always in accord with the facts, but those who expected him to do their thinking for them were also to blame.

Let us hope that the pendulum will not swing too far over and deny to the laboratory its rightful place in modern medicine. There were always some laboratory men who deplored the tendency to make of their work the final word in diagnosis. There were always practitioners who set a correct valuation upon reports from the laboratory. These have been the leaven which has slowly worked until I think we are beginning to view the laboratory in its proper light. It is absolutely essential in forwarding our knowledge, and it is one more link to add to the chain of evidence which we collect from history and physical examination in the establishment of a diagnosis. We who live in this marvellous age are apt to wonder how the older physicians managed to make diagnoses of their cases without all the help which we now have, from our various laboratory aids. A very little dip into the case records of the old masters will reveal an accuracy of observation, an attention to detail, a skill in physical examination, and a use of the induction method of reasoning which we may well envy.

We need to employ their methods more and only use the laboratory when we need the extra information to add to our evidence or to confirm evidence obtained from our own efforts. The attitude of medical students is a fair sample of this tendency to let

the other fellow do his thinking for him. In a modern equipped teaching hospital, with all its manifold departments, it is so simple to call upon the various laboratory departments to furnish all sorts of data. I find it exceedingly difficult to make the student do his own thinking and I find too, a tendency in myself to let the laboratory give me information which I might have acquired with a little intensive mental work. For some time I have been strenuously combating this pernicious tendency by having the students discuss the case with only the data which they themselves can furnish. After they have taken the history, made a careful physical examination, examined the urine, taken a blood count, examined the sputum, stomach contents, and feces (procedures which they themselves can do readily) we discuss the case. If, with this data, we cannot make a diagnosis the student is asked what other examinations he would like to have made. It may be that x-ray examination, or bacteriology of the blood, or chemistry of the blood, or Wassermann reaction, or other more elaborate examination is wanted, necessitating special laboratory apparatus and special technical training. All these procedures have probably been done. We then turn to the special reports and discuss the case with this new information. I find that teachers in other schools are using similar methods for the same reason that I have come to use them. I feel that we are training better doctors,—men and women who are learning to use their own brains and to make use of the senses with which kind Nature has endowed them.

With this tendency to abuse rather than to use the laboratory intelligently there is another tendency which is exemplified by the importance attached to the use of such an instrument as the blood pressure apparatus. When the physiologists measure blood pressure in the carotid artery of an animal they place a cannula directly in the artery and can therefore record the actual variations in the force of the heart beat. In man, however, our measurements must all be indirect. It was about twenty-five years ago

that the first blood pressure apparatus was devised for use in man. Some made use of the changes in pressure in the arteries of the fingers; for example, the tonometer of Gaertner; others, like von Basch, used the cuff on the brachial artery. After much experimentation, it was found that a cuff of 12 cm. in width produced the most constant results and did not give false readings of compression that the smaller band gave. Many instruments were devised, all of which have as their basic principle the elevation of a column of mercury as the result of air pressure in a cuff around the upper arm. Later the dial instrument came into use and at once there was altercation among the proponents of the dial or the mercury instrument. All this is well known to you and it seems unnecessary to go into the matter any further.

An enormous literature has grown up around the subject of blood pressure. Many statements which have been made are quite misleading and many are actually false. It has been shown repeatedly that the variations of blood pressure depend upon physiological factors, such as time of day, food, exercise, mental reactions, etc., so that it is quite important to take the blood pressure in any series of readings under conditions as nearly similar as possible. So much has been written about blood pressure that there is a tendency to give undue weight to small changes in pressure, forgetting that even in states of hypertension, pressure variations, for unaccountable reasons, may be very wide. The recognition, that these fluctuations take place, is of great value to us as it enables us to keep from drawing conclusions about any special form of treatment which we may have instituted.

Scattered through the literature are the most astounding statements in regard to treatment of hypertension. Credit is given to this or that drug or therapeutic procedure because of the difference in the readings during successive days and such publications have left the impression that blood pressure is a very accurate procedure. As a matter of fact, blood pressure is not an accurate

measurement of the heart force; it only approximates it, and the difference of a few millimeters one way or the other has very little significance. In view of the fact that all these physiological fluctuations make it more important to know if the pressure is in general high or low than just what the figure is, it seems to me quite immaterial whether one uses a dial or a mercury instrument. It is more accurate in the laboratory of Physics to measure variations in pressure by means of a standard column of mercury and in research in Physics it is essential that the utmost accuracy be attained. However, when we are measuring blood pressure in a human being, with all the various factors which make for sudden changes—factors over which we have no control—we cannot hope to arrive at such accuracy.

We used to look upon hypertension as a most serious disease. In fact we talked and wrote so much about blood pressure that the laity began to take great interest in the subject. As soon as a man found out he had high blood pressure he often became neurasthenic; he centered all his thoughts on the height of the pressure. If it happened to be 10 mm. lower on one examination than it had been previously he was elated and left the doctor's office with his head in the air. On the contrary, if the pressure was 10 mm. higher than it had been, he was apt to be much depressed and to feel as if the end of all things were near. We have been responsible for this feeling on the part of the laity. We too, in the early days of blood pressure estimation considered changes of 10 to 20 mm. of great significance, and many articles were written by really able men in which it was stated that the patient had a pressure of 180 mm. After taking a certain drug (whatever the author was at that time using,) in a day or two the pressure dropped to 170. Therefore, the drug reduced the pressure. How absurd such a statement is, we now know full well. We have learned to look upon hypertension for the most part as a compensatory process. At least one form of hypertension without demonstrable kid-

ney disease, with high systolic and high diastolic pressure, is hereditary. This is the so-called essential hypertension. To what this is due we have no idea. It manifests itself in comparatively early life (certainly as early as 25 years of age) and for how long it lasts before apoplexy usually claims the victim, I do not think anyone can say. I am sure that all of us know ruddy, healthy people in whom, after the most painstaking examination, nothing is found but the hypertension. A great many of these cases are found on examination for Life Insurance. They have always supposed themselves to be well, and they are usually much disturbed when told that they are not acceptable risks on account of a blood pressure which is beyond the limits set by the Life Insurance Company. It is true that Life Insurance Companies, taking the mortality tables of thousands of individuals, find that hypertension shortens the expected span of life. No one can deny the validity of these statistics, but in treating the individual patient I think we must be careful not to look upon a hypertensive state as a very serious and soon-to-be-fatal disease.

Now we know that the systolic pressure is not the whole of a blood pressure estimation, any more than the count of the red cells tells us all about an anemia. It is generally conceded today that the diastolic pressure is also most important, and that, in order to gain real information, one must take both maximum and minimum pressures. The former shows the total work of the heart approximately; the latter represents the peripheral resistance, the back pressure which is exerted against the aortic valves, and the dead weight which the heart has to overcome before it starts a drop of blood in circulation. One can speak of the diastolic pressure as the potential energy and the pulse pressure—the difference between the systolic and diastolic pressures, the actual head of pressure which keeps the blood in circulation—as the kinetic energy of the heart.

I think this is a helpful manner of viewing the work of the heart. Thus a diastolic

pressure of 130-150mm. must have more deleterious effects upon the heart than one of 90-100mm. if the systolic be the same in both instances.

Since 1905 we have been using the auscultatory method of taking the blood pressure readings, rather than the palpatory. By the latter means it was practically impossible to get the diastolic pressure. With the auscultatory method and the division of the phenomenon into phases, some dispute arose as to the point where one should read the diastolic pressure. Should it be at the disappearance of all sound as the air in the cuff was reduced, or should it be taken at the point where the loud third tone suddenly becomes dull? This interested me very much, and at the Milwaukee County Hospital I made some records of blood pressure with a tambour and smoked paper. I found that there was a sudden change in amplitude of the pulse wave at the moment when the loud third tone changed to the dull tone. In some experiments carried out in the Physiological Laboratory of the University of Wisconsin, I was able to show that that point was actually the true minimum diastolic pressure. Practically there is, except in hypertension, very little difference in the reading between the sudden change of tone and the disappearance of all tone. So that, to take the diastolic at the disappearance of all tone does not give too great an error and can be used practically. Still, it has always seemed to me that it was much easier for the ear to catch a difference in tone than to tell, while listening intently, when tone actually disappeared.

Too much emphasis has been laid on accurate measurements of blood pressure. How can there be accurate measurements when two human beings and a man-made instrument are concerned in every estimation? Our figures are only approximately correct and can never be anything better. We know now what astounding fluctuations may take place in the systolic pressure, especially from hour to hour, day to day, depending upon many conditions over which neither we nor the patient have any control. We know,

too, that the systolic fluctuates much more widely than the diastolic, so that the diastolic really represents tension, so-called, better than the systolic pressure. Since we have seen remarkable fluctuations of systolic pressure under all sorts of conditions, we now naturally hesitate to attribute a decrease in systolic pressure to any therapeutic agent, or to any special form of diet, or to any deprivation of any of the various inorganic salts in the diet. I have arrived at the point where the actual figures do not have any great interest. I want to know the approximate systolic and the diastolic pressures. I am interested in the fact that there is hypertension and the kind of hypertension; that is, whether it occurs with normal or high diastolic pressure. Whether the systolic pressure is 180 or 210 mm. at any time I take it, is quite immaterial. After all, we have been rather swept along in the belief that hypertensive states were most serious for the possessors. Hypertension is only a symptom or a symptomecomplex and should be evaluated as such. It should not be looked upon as the whole; it is only a part. It is an important symptom; it is not usually a normal state of the circulation and yet I have seen so many cases of essential hypertension, those with history of hypertension and apoplexy in the antecedents, who have had hypertension for years and have been intense, dominating persons that I cannot view such cases as particularly serious. It almost makes one believe that intense activity and driving force in such people is caused by the increased tension and the increased pulse pressure, and far from being a liability, it is actually an asset. In general it is true that marked hypotension is found in those who are always tired and cannot engage in any sort of activity without becoming exhausted. I would not go so far as to say that it is of advantage for a man or woman to have hypertension, provided the kidneys are functionally normal, but I do feel much more hopeful in the prognosis of these persons than I formerly felt and I feel that I can, with clear conscience, give them every encouragement and hope for a useful

life. The long and short of it is, that we have looked at this matter from too gloomy a standpoint. We must change our attitude and do all we can now to offset the damage that we have done in the past. I would not say that hypertension is a trivial matter; it certainly is not. But it is not the beginning of the end when it is discovered (for it may have been present for years unknown to the patient), it is only one sign which must be taken into consideration in the study of the whole individual.

I still believe that the majority of such people die of an apoplectic stroke. But what of it? One has to die sometime and it is better to die with boots and spurs on than to pamper oneself into a state of chronic invalidism where one can't do this and mustn't do that. Suppose you had essential hypertension without functional kidney changes (and some of you within the sound of my voice probably have it), how would you like to be treated? Would you wish your activities curtailed down to a point where you would chafe at the restrictions placed upon your life and habits, or would you rather take the chance and live rationally but still actively? You know that you can influence the pressure very little, if any at all, by any procedures. A course of baths, water or mud, at one of the numerous sanatoria combined with various forms of electrotherapeutics and restricted diet often seems to reduce the pressure and much talk is made by those in the sanatoria that they can reduce blood pressure. They can reduce it down to an irreducible minimum beyond which, if the course of treatment and diet is too strenuous, the patient begins to suffer from too little blood to his vital centers. During our active life, under stress and strain, worry and work, our blood pressure is at its highest. Let anyone stop and rest in quiet surroundings, free from mental strain, and his blood pressure will fall to the normal for him or even below his normal. Immediately, however, on his return to his former life the pressure goes up again to where it is needed to carry on that particular individual. For every heart beat work

is done. A heart which is beating at 70 and normal pressure, has less actual work to perform than the heart beating at the same rate with hypertension. A saving in number of beats per minute, or a reduction of pressure, or both, relieves the heart. It follows, then, that it is good common sense to have the hypertension patient live rationally and hygienically as any other human being should live, and periods of calm rest cannot do harm but may, and possibly do, shove off the fatal day. The important points are: that essential hypertension is not the serious condition it was formally thought to be: the blood pressure has normally many variations due to numerous causes: attempts to reduce hypertension are very slightly, if at all, successful: the patient should be encouraged and cheered by his visits to his doctor. By combating the prevalent view of high blood pressure now held by the laity, we shall, I am sure, not cause any earlier demises. We shall, on the contrary, relieve many minds of a gaunt fear which continually haunts them, and we can make life brighter and more cheerful for them.

The study of the chemistry of the blood in the last few years has given us an understanding of some of the problems in disease which we never, otherwise, would have obtained. Studies on the non-protein nitrogen have advanced our conceptions and have assisted us in the treatment of some of the chronic diseases. The intensive study carried on by the laboratory workers and the publication of their varying results and their criticisms of each other's methods, has helped to befuddle the mind of the ordinary man not versed in the complicated subjects included under the term "biochemistry". One worker insists that one substance is more important than all the others; another worker insists that another substance is most important, and both write long articles on the subject, each proving to his own satisfaction that he is right. I suppose that in the development of a subject so intensively worked over as the chemistry of the blood, there is bound to be much that is valueless and which has to be

discarded for better methods as more information is gained.

To us, as physicians, the most important practical application of the blood chemistry is the knowledge which it gives us of the functional capacity of the kidney. I do not think, however, that it is at all necessary to determine the non-protein nitrogen in all cases of kidney disease. A considerable amount of work is now at hand which proves that, in general, the phenolsulphonphthalein estimation is inversely proportional to the number of milligrams of non-protein nitrogen per 100cc of blood; that is to say, as the 'phthalein excretion decreases the non-protein nitrogen retention increases.

Frequently, I have heard reports read where the laboratory, upon request, estimated the total non-protein nitrogen, the urea, the uric acid, and the creatinin in one sample of blood. Such elaborate examinations are distinctly wasteful. They take up an enormous amount of time in the laboratory and they do not give any information commensurate with the labor spent. For practical purposes the total non-protein nitrogen will give all the information desired. High values for uric acid, for example, have no particular significance alone. The total N. P. N. under such conditions is increased and this includes uric acid. A higher creatinin retention occurs only with serious loss of function and it alone may have some prognostic bearing, but here again the total N. P. N. will be increased but the actual number of milligrams of increase cannot always be used to gauge the time of death. A bad prognosis can be given very accurately by the careful doctor who has studied his patient from all angles. I will admit that it is interesting to know the blood chemistry in certain conditions; that for purposes of research it is absolutely essential, but I cannot agree that it gives us very much more important information about the average case than that which we can get by other simpler means. I believe if we study our cases more carefully by all the methods which we ourselves can employ, we shall not need to call in the help of the

laboratory except in the unusual cases.

I think we must bear in mind that all these procedures are in the hands of those who are paid for their time and they must necessarily be remunerated for the work which they do. To perform every test that one has heard about upon every patient without any judgement as to why the information is wanted seems to me to be an unjustifiable attack upon the patient's pocket-book and, if we are dealing with technicians paid by the State or subdivisions of the State in hospitals, we should not take advantage of this fact to have them perform tests which often merely satisfy a curiosity and are not always essential in the diagnosis of the case. Many a time I have seen the most elaborate reports handed back from laboratory technicians, none of which has any particular meaning in the settlement of the diagnosis of the disease from which the individual patient suffers. Such wholesale procedures seem to me quite useless and unjustifiable.

We are passing through an age of multiplication of medical journals and text books. With the increasing numbers of medical men and the ethical limitations imposed upon advertising their wares, the only avenue open to them is publication in medical journals. This results in a flood of articles every month which has arrived at such proportions that it is impossible for any one man to read even a small proportion of the articles. Specialization has reached such a point that the literature of any one small branch is about as much as a man can possibly look over. Unfortunately, many of the articles published are of no particular value, but often they are written by men whose names are widely known and therefore they attract an undue amount of attention. It is difficult to discriminate among the many articles written and no one knows that better than the man who is doing general practice and trying to keep up with all the advances made in Medicine today.

I know of no solution for this problem which confronts us all and seems to be getting worse every year. Occasionally, some

well-known man begins to write about some procedure which he has devised and he hammers away at it until the whole medical world is talking about his work. In his hands his method may have given results which he claims, but in the hands of others who try his method much harm may result. Many useless and quite harmful procedures have been highly recommended by leaders of the profession, so that it behooves us to be exceedingly critical of all new methods which we read, and to test them by the canons of our own experience and our own common sense.

The scientific medical education which we go through to fit us for our own profession does not change certain fundamental attributes which are inherent in us as human beings. One of the most striking of human traits is faddism and we are not exempt from this very human frailty. As one goes back over the history of Medicine he finds the profession following some fad or other intensely, only to cast it aside in order to take up another fad which is at the moment popular. We may not wish to believe this, but the fact remains, as "he who runs may read." Not so long ago Surgeons were stripping women of all their pelvic organs for almost any complaint in the lower abdomen. Many a woman has been made a chronic neurasthenic following the production of artificial menopause. This fad has had its day, fortunately.

Then the operation of dilatation and curettage of the uterus was performed upon thousands of young women upon the advice of those wellknown in the profession. Now we realize that such a procedure does no good, but often does harm and that, too, has been given up.

There comes along a famous surgeon who tells us that the colon is the source of all our ills. It is a sewer, it is a breeding place for billions of bacteria and absorption from this sewer is the cause of all sorts of ailments. Away with it, or short-circuit it so that it cannot perform its deleterious action! The result is more poor humans maimed for life, for many a surgeon eagerly ac-

cepted the idea and tried it out on the strong recommendation of the famous surgeon. Little is heard about that procedure now.

At the present time we are following the focal infection advocates, and, as a consequence, are wantonly and ruthlessly removing tonsils from thousands and thousands of children. In the inspection of school children nurses are sending for tonsillectomy any child who has tonsils easily visible. Without more ado, out come the tonsils. Now, there are several angles to this question which it might be well to examine briefly.

First, let me say that I am heartily in favor of school inspection. I recognize its great value in prevention of disease and in rehabilitation of the backward children. This tendency to blame all ills upon the tonsils and to have them removed at once is to my mind what is open to criticism. Let us grant for the sake or argument that the virus of rheumatic fever, with its consequent heart damage, enters through the tonsils. Let us grant that there are thousands of cases of heart disease in the land. Now there are those who maintain that, because of these arguments mentioned, all children with large tonsils should have them removed as a prophylactic measure. As well remove all appendices in children because some die with inflammation of the appendix. No one would seriously advocate that. The tonsils are so easy to get at. They are hidden in the body, yet can readily be seen, palpated, squeezed, and removed. The very essential point which I think is forgotten is that the lymphatic pharyngeal ring in children is an important part of their immunity forces. In fact, so essential is it in Nature's eyes that when tonsils are removed in very early childhood new lymphatic tissue grows in the tonsillar fossae to take the place of the ablated lymphatic tissue. Evidently it serves some very useful purpose. The tonsil is not always the portal of entry of the rheumatic virus. Until we know more about what the cause of rheumatic fever is we are stabbing somewhat

blindly in advocating removal of all tonsils which are large and which have easily visible crypts. The large tonsil with open crypts discharging its plugs into the mouth cavity is not a menace to health that the small tonsil is with its infected centre from which bacteria and toxins are absorbed into the blood.

I am not for a moment denying the very evident part which infected tonsils play, nor am I denying that they are portals of entry for various cocci as well as bacilli, including the tubercle bacillus. I am almost daily recommending in the clinic that tonsils be removed because it seems to me that they are responsible for the continuation of the patient's symptoms. I cannot be accused of being an opponent of the chronic focal infection idea. It has much to recommend it and I have had personal experience with it. What I should like to see is a bit more judgement and common sense exhibited in this question of tonsillectomy in youngsters. I would like to see more laryngologists refuse to operate upon children who are sent to them by the school nurses because the tonsils are the seat of simple hypertrophy. I know some laryngologists whose views on the subject make mine seem very mild, so that I feel not alone and isolated, a voice crying in the wilderness.

When this fad has settled into its proper place in medical thought, others will come, and still others. There is not one among us who could conscientiously cast the first stone at his neighbor. If we do not follow one fad, we follow some other. Are there any criteria by which we may judge the value of the newest and latest recommendation by the prominent doctor whose name constantly appears at the heading of articles in the medical journals?

I know of none which would help all. For my own part, I have tried to measure them by standards which are more or less pragmatic. I ask myself the questions: Is this procedure physiological? Could Nature adjust herself to this procedure? Is it good ordinary common sense which appeals to reason? I know as the years have gone by

that, by asking those simple questions I have not wasted hours of time. I have seen in a brief twenty years the rise and fall of many a vaunted method and many a well vouched-for theory. To be moderately skeptical is a healthy state of mind. One need not carry it to such an extreme as to be violently prejudiced and non-receptive to new ideas. Education is designed for the purpose of enabling us to form opinions rather than prejudices. And an educated profession such as ours is, should be composed of members who stand with their feet on the solid ground and are not swayed hither and thither by the mental reactions which rock the less educated.

Those of you who are familiar with the history of Medicine must have been struck by the periodicity with which fads come and go, and also by the fact that procedures tried and found wanting are again resurrected and recommended sometimes as new methods. Some limitations of the flood of articles appearing in the journals might be made if there were, so to speak, historical censors connected with every medical journal. In the absence of such persons we shall continue to suffer from the same evils from which we have been suffering for some years..

The medical profession is a singularly conservative body of men, in spite of the fact that they are occasionally swept off their balance and follow false gods. However, in the main I think that statement of conservatism holds true and it is well that it is so; otherwise, we should be rushing hither and thither after many will-o'-the-wisps. It has taken a long time for the profession to realize that drugs, as such, have only a limited sphere in the treatment of disease. We know of only a few drugs which have a definite physiological action and are frankly curative when administered for specific diseases. I think the general tendency of the profession today is to write less complicated prescriptions than were formerly written. In part this may be due to the fact that commercial drug houses have put out and widely advertised so many

preparations for all sorts of diseases, that the physician may find a remedy in a bottle or box for practically every known disease.

We are so in the habit of looking upon drugs as a means to cure all human ailments that we have sadly neglected forms of treatment which have been in use for centuries, but which have been more or less relegated to the background by the profession, as forms of semi-quackery. The result of our neglect of physical therapeutics has been the rise of cults whose members are for the most part uneducated, but who do supply to many of the public, means of treatment which we ourselves should have employed. These cults, in the guise of various forms of mechanical therapy, are sneaking in to the practice of treating people through the back door and often have been given special privileges by state legislatures. Whenever we, as a profession, rise in our righteous anger and appear as opponents of any of the cults, we are accused of having ulterior motives. We are told that we are fighting the cults because they are taking money out of our pockets. In certain state legislatures some of the law-makers have frankly stated that this whole question of medical licensure and elevation of educational standards for those desiring to practise any form of the healing art was just a scrap among doctors. When such ignorance exists among the law-makers of the land we are almost helpless in combating the entrance into the field of any number of members of a cult who practice whatever they please upon the public.

Cults we have always had from time immemorial and cults we shall always have with us and it seems to me sometimes rather a waste of our time to attempt to fight the growth of any one of the cults. Eventually they begin to scrap among themselves; the better ones become more educated, they develop higher standards, and there comes a time when that cult dies or is absorbed into Medicine as Homeopathy has been absorbed, and a new cult is again born. As long as human nature is what it is,—superstitious

and easily led by alluring promises (and that will probably be for all time)—we shall see the rise and fall of many cults.

I think, however, there is a lesson for us; that lesson is, as I have intimated above, that we ourselves have placed too much dependence upon drug therapy. We have undervalued either conscious or unconscious psychotherapy, and we have altogether neglected the effects of light, heat, massage, baths, food, and drink upon our patients. Again we have been looking to the laboratory to solve the treatment of disease for us and we have sera and vaccines of all sorts which we are urged to inject into our patients in order to cure them of their ills. We have not arrived yet at the day when for every disease we have a specific serum or vaccine. With all the intensive work which has been done, our curative sera are few. The use of vaccines therapeutically has been criticised from many quarters and the weight of evidence at the present time is that they are not of as great value as they were thought to be.

Our patients come to us to be relieved of their illnesses and it really makes no difference to them how they are relieved, provided they are not unduly inconvenienced in the process of relief. If we cannot give them the relief they seek they will surely go elsewhere and should they be, as they think, cured by some member of a special cult, it is but natural that they should feel very friendly towards the other members of the cult and sometimes, I fear, they feel rather hostile towards the medical profession. So, after all, it would appear as if one of the reasons for the rise of many of the cults might be laid at our door. Two hopeful signs, however, appear to me. One is that the cults are now fighting among themselves like vultures over carrion. The other is that, as yet, our Public Health Departments are still in the hands of those who appreciate what Medicine has done for the world.

Just a word more about another modern tendency which bids fair to eclipse all the rest which have gone before. I refer to the place of organotherapy in medical practice.

I know of no more fertile field for the play of a vivid imagination than the field covered by what we call endocrinology. When we sift it all critically, how much do we actually know about the hypo-, hyper-, and dysfunction of the glands of internal secretion? How much actual knowledge, not speculation, have we of the interrelations of these most important glands? Having had in our possession the brilliant work of the English investigators upon the thyroid gland, and having seen wonderful effects of its extract in diseases of thyroid insufficiency, it was but natural that other glands should be studied to determine if they had an extractable substance and if the substance had any effect when used in the human body. An enormous amount of work has been done, much of it negative value, much is contradictory. The subject is a fascinating one and invites study, but the investigation should be undertaken by the Horsleys, the Bantings, and McLeods; not by the Harrowers and the Reeds, and Carnricks.

As the result of the interest in the internal secretions and the known effect of ablation of the ovaries and of castration, we have had attempts made to graft ovaries and testicles into human beings. Thus far, I am not aware of any unequivocal, successful result of such transplantation. Certain attempts which were made by one surgeon who related his results in a paper before a Society meeting at which I was present, were grossly misinterpreted by him. However, he reported successful transplantation of a piece of testicle into the scrotal subcutaneous tissue. From the transplantation of human gland to human, to other animal to human was but an easy step for certain minds to take. Consequently, we had monkey and goat gland transplantations and much argument in the daily press pro and con, with interviews by prominent doctors. Let us state categorically, here and now, that all such experiments are failures. In state of great bodily deprivation when the tissues are crying for the internal gland secretion it **may** be possible to make a homologous graft grow. Mental craving for re-

juvenation, however, will not cause homologous or heterologous transplants to grow in men whose tissues have grown old. It is physiological for the reproductive glands to atrophy gradually as the years go by. No method, not even Steinach's operation, can make them active again.

We need careful experimenters in this field. There is much to do and much to be learned. Only recently the Toronto investigators, by a brilliant research, have successfully isolated the internal secretion of the pancreas which is intimately concerned in the metabolism of carbohydrates. In certain quarters it is thought that the problem of diabetes mellitus is now solved. All the diabetic needs is some of this substance (Insulin) and he can eat about as he pleases. It would be tragic if people felt this way and acted as they felt. Unless the medical profession from specialist to general practitioner insists that the discovery of Insulin in no way removes the necessity for strict adherence to diet, and hammers this in thoroughly, I voice the opinion of many who feel that in the six months after Insulin is put on the market the diabetic mortality will show a sharp rise.

The past twenty years has seen a revolution in the South, brought about by men who actively fought the great endemic and epidemic diseases and at least two gave up their lives in the fight. As long as the medical profession has its heroes and its army of workers slaving for the betterment of the human race we can be optimistic about the future. Tendencies which we see and sometimes fret about too much are only ephemeral. In the great scheme of things they have but a fleeting moment of existence and alter but little, if any, the onward march of progress.

URETERAL CALCULUS IN A SIX YEAR OLD CHILD; A CASE REPORT.

Wm. W. Anderson, A. B., M. D., and Walter R. Holmes, A. B., M. D., F. A. C. S.
Atlanta, Ga.

L. W., a white male, 6 years old, was brought in by his foster mother on January 27, 1921, complaining of frequent attacks of abdominal pain in the right lower quadrant. His family history and past history had no bearing on his present illness. He is an adopted child of good parentage, his foster mother never having had any children. His mother and father are both living and well. They have several other healthy children. He has lived with his foster mother since he was three years of age. His infancy and early childhood were negative. At 3 years of age he had a mild attack of measles, and at 5 years of age he had whooping cough with no complications. He was circumcised when an infant and his tonsils were removed at 5 years of age on account of frequent colds, from which he has been free since that time.

He weighed "about 9 or 10" pounds at birth, and has always been over the average size in weight and height. He walked, talked and cut teeth about the usual time. At 3 years of age he was 36 inches tall and weighed 36 pounds. He weighed 56 pounds in December, 1920. There has been no recent loss of weight, and he has continued to grow and develop in spite of his attacks which he has been having for the past 3 years. He started to school this year, he likes his school work and is very fond of his teacher.

Three years ago, when he was 3 years of age, in the summer of 1918, he had a severe cold, "almost a pneumonia," after which his "stomach was completely upset." He could retain nothing by mouth, he vomited almost continuously, but he had no diarrhea or constipation. He was very toxic and emaciated rapidly.

His physicians advised his mother at this time to take him to Florida, which she did. She carried him on a pillow, not expecting him to live. After she was in



PLATE 1.
X-ray of genito-urinary tract, showing shadow of calculus in ureter.

Florida for one week, however, he was "playing around," apparently cured. Two weeks later he had his first attack. At this time he was playing outdoors, in a good humor, and in good condition, when he came into the house, laid down on a couch, and told his mother that his "tummy" hurt. He placed his hand over McBurney's point. This attack lasted for about 45 minutes, after which the pain ceased gradually, and he later on, within about an hour or so, got up of his own accord and went back to play. There was no elevation of body temperature as recorded by a clinical thermometer, the bowels were not upset, and there were no urinary symptoms.

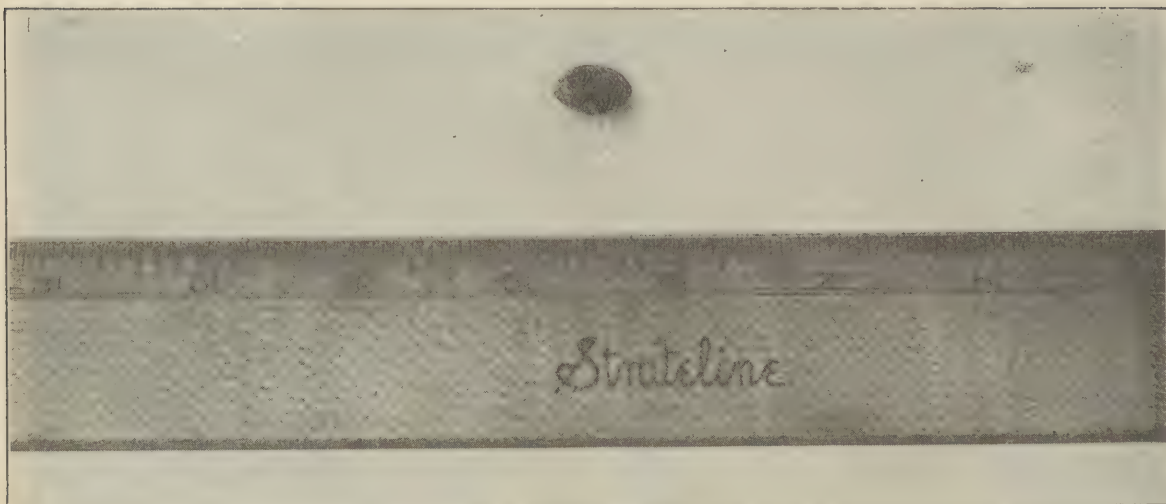


PLATE 2.
Photograph of ureteral calculus. Scale: 1-inch rule.

Since this first attack, 3 years ago, he has continued to have similar ones about every 2 to 6 weeks, simulating the first one. He usually knows when they are "coming on," as he comes in from his play and lays down. His mother has never noticed any elevation of body temperature, any association with either constipation or diarrhea, or other gastro-intestinal disorders. He has had no polyuria, suppression, nor has he passed any large amount of urine at any one time. He has never been jaundiced. He had his last attack about 4 weeks before his first visit to the office. For the past 5 or 6 months his physician has had him on a semi-liquid diet, consisting largely of soups, mashed white potatoes, spinach, with no meats, and has urged his mother to have his appendix removed. She, however, has recently had an appendectomy, and feels that the boy's signs and symptoms are not characteristic of her own attacks.

When first seen in January, 1921, his temperature by mouth was 98, pulse 80 per minute, respirations 20 per minute, the abdominal respiratory movements being free and equal. Completely stripped he weighed 53 pounds 1 ounce, his height was 49 inches, the circumference of his head was $20\frac{1}{8}$ inches and his chest $25\frac{1}{4}$ inches. He was a well developed, pink and rosy boy, in excellent condition, complaining of

no pain or discomfort. He had several carious teeth, a moderate pharyngitis and a moderate amount of tonsillar tissue in his pharynx. An examination of his abdomen at this time threw little light on his complaint. There was a diastasis recti admitting one finger tip, and the liver edge could be felt, smooth, regular, one finger breadth below the costal margin in the right mammary line. No other masses could be made out, no pain on pressure anywhere was elicited, and no muscular rigidity. The abdomen was not examined in a standing position at this time. A freshly voided specimen of urine showed a clear amber urine, acid to litmus, specific gravity 1020, sugar and albumin negative, microscopic negative, no red blood cells, no white blood cells, no casts. His blood examination at this time was: Hemoglobin 80%, white blood cells 9,400. His mother was told that he showed no signs of appendicitis at the present time and a request was made to see him during his next attack.

He was quite well until March 11, 1921, when in the middle of the day he came into the house, lay down on his couch and complained of pain in his right upper abdomen. At this time his rectal temperature was 98.8, pulse 120. An occasional extrasystole could be felt. He looked rather sallow, but had no drawn, anxious expression. On

examining his abdomen at this visit, a mass in the right upper quadrant about the size of an orange, extending two fingers breadths below the costal margin, freely movable, moving on respiration, could be made out. He complained of pain on deep pressure in this area, but had no muscular spasm. His abdominal respiratory movements were free and equal on the two sides. This mass could be felt better in a standing position. A leucocyte count showed 10,200 cells. A freshly voided specimen of urine was of 1,022 specific gravity, neutral to litmus paper, contained $\frac{3}{4}$ grams of albumin as determined by an Esbach albuminometer, and on microscopical examination there were numerous red blood cells, an occasional white blood cell, no casts. On returning to his home two and one-half hours after his attack first began, he was sitting up, in a good humor and complaining of no pain.

That night his mother said that he passed a few grains of some material in his urine, but she was unable to demonstrate it in his total urine specimen the following day. He passed about a quart of urine the next 24 hours, no large amount at one time, and his mother says that she noted no abnormality either in the number of times he urinated, or the character of the urine.

On x-raying his genito-urinary tract, a shadow $\frac{1}{2}$ cm. wide and $1\frac{1}{4}$ cm. long was seen in the region of the right lower ureter (see plate I) at the location where it crosses the right sacro-iliac joint. On making a series of exposures at different angles it was determined that this calcified area was deep in the pelvis, slightly anterior to the sacro-iliac joint, and not in the bone. On account of the age of the patient it was thought best to remove this stone extraperitoneally rather than by catheterizing the ureter.

On March 21, 1921, with the patient in the dorsal position, iodine skin technique, an incision was made over the right lower abdominal quadrant, extending from a point one finger's breadth above the anterior superior spine of the ilium, parallel

to Poupart's ligament, and 2 finger's breadth above this structure, across to the mid-line. The fascia of the external oblique muscle was divided. The internal oblique fibers were separated at the lower angle of the incision but at the upper angle of the incision a few of the fibers were cut. The transversalis fascia was divided in the line of the incision. The peritoneum was not opened but was carefully dissected back from the lateral pelvic wall and out along the brim of the pelvis. This was done without difficulty as there was a definite line of cleavage. There was no bleeding. The iliac vessel on the right side was identified, and by tracing inward along its course the ureter was identified as it crossed this vessel. It was found that, as usual, the ureter had adhered to the peritoneum and had been lifted up, along with the peritoneum, in the dissection. The ureter was thickened, and there was a moderate account of periureteritis. The stone could be felt just below the brim of the pelvis at the point where the ureter crossed the iliac vessel. The ureter was mobilized by means of a tape passed beneath it, to prevent the stone from slipping back towards the kidney. An incision was then made in the ureter in its long axis, just above the site of the stone. The stone was pushed up and delivered through the incision. The stone was about the size and shape of a watermelon seed, $1\frac{1}{4}$ cm. long and $\frac{1}{2}$ cm. wide. The ureter was dilated with a number 12 French bougie. No obstruction was encountered in passing the bougie. The incision in the ureter was closed with No 0 chromic cat gut, interrupted sutures. The operative field was left dry. A small cigarette drain was left in the upper angle of the incision extending down to the region of the ureter. The incision was then closed in layers, No. 1 chromic cat gut interrupted in the muscles and fascia, No. 1 plain in the subcutaneous fat. The skin was closed with interrupted fine silk. The child left the operating room in good condition.

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Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department**THE SAVANNAH MEETING.**

Our recent meeting in Savannah is one which will be long remembered by every member in attendance. The attendance was good—nearly 400 members were registered. Every session of the Scientific assembly was crowded with papers of vital interest and the members showed their appreciation by their close attention and free discussions. The Committee on Scientific Work, of which Dr. A. G. Fort was Chairman, deserves the thanks of the entire Association for its well balanced and interesting program.

All papers for each session were completed on scheduled time. Each essayist present read his paper at the session to which it was assigned and there was no overlapping or crowding out because of an overburdened program, as has frequently been the case in the past.

The address of our President, Dr. J. M. Smith, is one which will be long remembered. The assembly hall was crowded and every member present appreciated it to the fullest extent. Dr. Smith made a forceful plea for higher ideals in the practice of our profession.

The address of our invited guest, Dr. Louis M. Warfield, on "Some Tendencies in Modern Medicine" furnished much food for thought. It is a literary masterpiece and is brimming full of the wisdom acquired by much thoughtful study and careful observation.

The meetings of the House of Delegates were unusually well attended. The chairmen of the standing and special committees rendered constructive reports. These men, who are serving the Association unselfishly, deserve our thanks. In addition to the committees already mentioned, a Committee on Industrial Medicine and Surgery, with Dr. L. G. Hardman as Chairman, was created. Much good is expected from this new committee in its work for the industrial development of Georgia.

The members of Council reported much constructive work for the Association in each Congressional District. Their reports showed that the Association is better organized now than ever before in its history. From the standpoint of organization, the Council is the backbone of the Association.

The members of the Georgia Medical Society entertained the Association as it has never been entertained before. The Committee on Arrangements, headed by Dr. W. R. Dancy as Chairman, did everything possible for the visiting men. The assembly hall, space provided for the meetings of the House of Delegates, Council and Committees were ideally situated. More exhibitors and a higher class of exhibits were present than we have had at any previous meeting. The banquet hall was crowded on the night of the annual banquet.

The Ladies Entertainment Committee, composed of wives of the physicians of Savannah, provided many special features for the visiting ladies. In fact, every visiting physician's wife went home feeling that she was glad she came and with the firm resolve to attend each future meeting of the Association. Their presence went far towards making this *the ideal meeting*.

URETERAL CALCULUS IN SIX YEAR OLD CHILD; A CASE REPORT.

(Continued from page 237)

The wound healed per primum, urine did not escape through the incision, and the patient made an uneventful recovery. He continued to pass red blood cells in his urine for the next four days following his operation, after which time, over a period of two years, with the exception of tonsillar diphtheria in September, 1922, he has further attacks of abdominal pain.

436 Peachtree.

Urine Chart.

URINE CHART.

Date	Amt	Sp	G	R	Alb	Sug	Microscopic and remarks
1-27-1921	Spec	1020	Ac	Neg	Neg		Few WBC centrifuged spec, No RBC, no casts
First seen							Many RBC, few WBC, no casts, $\frac{3}{4}$ gm albumin per litter (Esbach albuino-meter)
3-12-1921	Spec	1022	N	Pos	Neg		Many RBC, few WBC, $\frac{1}{2}$ gm albumin per litter
Acute attack							Moderate number RBC
3-13-1921	Spec			Pos	Neg		Few RBC, few WBC
3-14-1921	24 hr	1024	Al	Tr	Neg		Few RBC, few WBC
3-16-1921	24 hr	1023		Neg	Neg		Few RBC, few WBC
3-20-1921		1016	Ac	Tr	Neg		Few RBC, few WBC
3-21-1921		1024	Ac	Tr	Neg		Phenolsulphonphthalein kidney function test 52% in 2 hours. Few RBC, few WBC
Day of Operation							Moderate number RBC
3-22-1921		1023	Ac	Tr	Neg		Occasional WBC
3-23-1921	2000	1008	N	Ftr	Neg		Few RBC
3-24-1921	1275	1010		Ftr	Neg		Occasional RBC
3-25-1921	400?	1020	N	Ftr	Neg		Occasional RBC and WBC
3-26-1921	1750	1010	N	Ftr	Neg		No RBC, few WBC
3-28-1921	1900	1010	Al	Neg	Neg		No RBC, no WBC
4-6-1921	Spec	1020	Al	Neg	Neg		No RBC, no WBC

COMMUNICATION FROM OUR PRESIDENT.

May 28th, 1923.

Dr. Allen Bunce, Sec.

Atlanta, Ga.

Dear Doctor:

I am enclosing committee appointments which I hope are not too late for your publication.

Have just returned from a visit to Waynesboro, Millen and Augusta. Had a good meeting with the Waynesboro doctors, and a member of the County Commissioners. Think we did some good as to public health matters and put things in a new light with the Commissioners. The doctors are all in favor of the Post Graduate Clinics and promise to attend.

The Augusta men are delighted with the idea of the clinics, and have gone to work to get organized for a clinic in the early Fall. We also talked over matters of public

health, the Legislature, appropriations for the State Board of Health and other matters that will help the profession in general. I feel very much encouraged, and feel that we are going to do good constructive work this year.

It has occurred to me that if we could get the presidents of the district societies to exchange date ideas before they settle on a definite meeting time, then let all districts that are adjacent have meetings for, say four days each succeeding the other—that it would be of great help to the President in his attempt to get around.

Then after, say four consecutive meetings let things hold up for a couple of weeks, then take up a few more districts for a few days. In this way the entire state could be covered within the course of a year. But as it is now there is no regularity as to meeting time and it will be impossible for me to come anywhere near getting around. I will see a good many of the societies this summer and the balance during the winter. What do you think of the idea?

I wish it were possible for you to get men in each district to write letters at intervals giving some constructive suggestions about the state organization and what they think we need. No one man can do all the constructive work. So let's hear from others.

JOHN W. DANIEL.

THE ASSOCIATION OF PENITENTIARY CAMP PHYSICIANS

The Association of Penitentiary Camp Physicians of Georgia was organized at Americus, Ga. May the 24th, 1923., with the election of the following officers: Dr. J. O. Elrod, Forsyth, Ga., Pres. Dr. R. L. Miller, Waynesboro, Ga., Vice-Pres. J. F. Lunsford, Preston, Ga., Sec. All Physicians who hold commissions from the Prison Commission are members of the Association, also the entire Prison Board are to be active members.

The object of the Association is to promote the physical welfare of the convicts in the various camps of the State, and to improve the sanitary conditions of said camps.

The following were present and assisted in the organization of the Association: Drs. R. T. Crozier, Ft. Gaines. J. E. L. Johnson, Roberta. M. N. Stow, Jesup. T. S. Bailey, Newnan. R. L. Miller, Waynesboro, T. G. Turk, Reynolds. R. L. McMickle, Buena Vista. F. L. Cato, Americus. D. R. Bustle, Rochell. B. B. Jones, Metter. C. A. Greer, Oglethorpe. J. O. Kelley, Avery. J. W. Cowart, Walden. W. L. Davis, Albany. O. W. Statham, Leesburg. C. R. Barksdale, Blakely. J. V. Talley, Nashville. Guy D. Compton, Milledgeville, E. O. Sharnitzky, Augusta. J. O. Elrod, Forsyth. J. F. Lunsford, Preston and others.

The Association meets annually on the day before and at the same place as the State Association of County Commissioners.

Judges Patterson, Davidson and Rainey were present and assured us of their hearty cooperation and assistance in all matters that might come before them.

ORGANIZATION OF THE PEDIATRIC SECTION OF THE FULTON COUNTY MEDICAL SOCIETY.

The Pediatric Section of the Fulton County Medical Society was organized March 16, 1923. Those present were Drs. Adkins, Anderson, Boynton, Cook, Freeman, Funkhouser, Hoppe, Mashburn, McAliley, Muse, Ragan, Roberts, Sims, Yampolski. Dr. W. N. Adkins was elected Chairman, Dr. M. R. Sims Vice-chairman, and Dr. Hines Roberts Secretary.

The following men were declared eligible for membership: Drs. W. N. Adkins, C. A. Almand, W. W. Anderson, C. E. Boynton, Howard Bucknell, G. W. Holmes Cheney, Geo. L. Cook, Wm. F. Freeman, W. L. Funkhouser, L. D. Hoppe, Chas. M. Mashburn, L. H. Muse, R. G. McAliley, Willis E. Ragan, M. H. Roberts, Marshall R. Sims, S. A. Visanska, Jas. A. Wood, Joseph Yampolski. New members shall be confined to members in good standing in the County Society, who confine their work to Pediatrics.

The Section will meet on the second Thursday of each month at the Academy of Medicine on Howard St., at 8 P. M. The scien-

tific program will consist of—1st, Presentation of a case or case report; 2nd, a paper prepared by some member of the Section or one designated by the Program Committee.

The program will be mailed to members two days before each meeting.

Members of the profession in the county or visiting in the city who are interested in the discussions at these meetings are cordially invited to attend. It is the desire of the Section that its transaction prove of interest and benefit not only to its members but to the profession at large.

THE GOOD SAMARITAN CLINIC

Through the philanthropy of several of Atlanta's best known citizens, a clinic for the study and relief of disorders of the ductless glands has been established at number ten East Linden street, Atlanta. The clinic opened for the reception of patients on Monday, May 14, 1923.

The clinic is to be operated strictly on a charity basis and no one able to pay for medical attention will be admitted. It is to be non-sectarian, and no creed or nationality will influence the admission of a patient.

Because of the present chaotic condition in organotherapy occasioned by lack of real knowledge concerning the function of the known glands, and because of the wide spread propaganda sent out by commercial houses and laboratories, this clinic, will doubtless fill a need and render great service both to the profession and to humanity.

It is its purpose to do research work, and to attempt to correlate glandular manifestations by studying cases from all angles of medicine. Each case accepted will be carried through the nine departments of the clinic and these represent, medicine, surgery, gynecology, eye, ear, nose and throat, diseases of children, pathology, metabolism, x-ray and orthodontia.

The board of trustees of the clinic will be composed of Forrest Adair, President, Hollins N. Randolph, Vice-President, Lindsey Hopkins, Frank Hawkins, Jos. A. McCord,

W. W. Banks, and Samuel C. Dobbs. These gentlemen have made the clinic possible by their generosity and are all prominent capitalists of Atlanta.

The medical staff will be composed of: Doctors E. C. Thrash, H. C. Sauls, Arch Elkin, W. S. Goldsmith, Floyd W. McRae, C. E. Boynton, W. N. Adkins, George L. Cook, H. M. Lokey, E. Grady Clay, W. C. Lyle, Walter Holmes, J. R. Barfield, W. E. Yankey, A. H. Bunce, J. W. Landham, Hal M. Davison, and C. C. Howard.

Dr. Chas. E. Boynton is Chairman of the medical staff, Dr. W. S. Goldsmith, vice-chairman, Dr. Hal M. Davison, secretary and Dr. Arch Elkin, medical director.

The clinic will be open every day, except Sunday, from nine in the morning until five in the afternoon.

NEWS ITEMS

Dr. Chas. R. Hancock has opened offices in the Atlanta National Bank Bldg., Atlanta, limiting his practice to Surgery and Gynecology. Dr. Hancock was formally Clinical Professor of Surgery at the New York Polyclinic Hospital and Post Graduate School for Doctors.

Dr. Joseph Yampolsky has opened offices at 931 Candler Bldg., Atlanta, limiting his practice to Diseases of Infants and Children with special attention given to diagnosis and treatment of hereditary lues.

Dr. Lauren H. Goldsmith has opened offices at 746 Peachtree Street, Atlanta, limiting his practice to Pediatrics.

Dr. John B. Duncan has opened offices at 1104 Fourth National Bank Bldg., Atlanta. His practice will be limited to Gynecology and Obstetrics.

Dr. William T. Freeman announces the opening of offices at 746 Peachtree St. Atlanta. Practice limited to Pediatrics.

The portrait of Mr. Asa G. Candler was presented to the Wesley Memorial Hospital, University Campus, by the Faculty of the Medical School of Emory University, on May 8th, 1923.

The Colorado School of Tuberculosis at Colorado Springs, Colo., announces that the fifth session of the school will begin on July 2nd to August 11th, 1923. This school is not conducted for profit. From August 4th to 11th opportunity will be offered for practical work in the various sanatoria. The preference of the students for special subjects, such as laboratory methods, X-Ray, Artificial pneumothorax, physical diagnosis, etc., will be consulted as far as possible.

Dr. W. H. Spiers announces the opening of The Seminole Sanitarium and Psychopathic Hospital at Near Orlando, Fla., for Diagnosis and Treatment of Nervous and Mental Diseases and Treatment of Drug and Alcoholic Habituates. The consultation office is at 38 W. Central Ave., Orlando, Fla.

The graduating classes of Emory University were tendered a reception on the evening of June the fourth in the Theological Building, Emory University Campus.

Commencement exercises of the Nurse's Training School of Wesley Memorial Hospital were held at the Hospital Auditorium, May 25th, 1923.

Commencement exercises of the Senior Class of St. Joseph Infirmary, Atlanta, were held May 26th, in the Marist College Auditorium.

The class of 1923 of the Davis-Fischer Training School for Nurses, Atlanta, held its graduating exercises June 5th, in the North Avenue Presbyterian Church.

Commencement exercises of the Piedmont Sanatorium Training School for Nurses, were held June 13th, in Taft Hall, Atlanta.

Dr. J. Turner McCall announces that he will henceforth limit his practice to Surgery and Surgical Consultation. His office is in the Medical Bldg., Rome, Ga.

A class of thirty nurses graduated from the Georgia Baptist Training School for Nurses. Exercises were held in the First Baptist Church, Atlanta, on June 19th.

The Utah State Medical Association met in Salt Lake City, June 20, 21, 22, 1923, for its Twenty-ninth Annual Meeting.

The Medical Association of the State of Alabama held its fifty-sixth consecutive Annual Session on April 17, 18, 19 and 20, 1923, in the Auditorium of The Battle House, Mobile, Ala.

The One Hundred and Thirty-first Annual Meeting of the Connecticut State Medical Society was held at the Lawn Club, New Haven, Conn., May 23rd, and 24th, 1923.

The Iowa State Medical Society held its Seventy-second Annual Meeting in Ottumwa, Iowa, May 9, 10, 11, 1923.

The Louisiana State Medical Society held its Forty-fourth Annual Meeting April 24th, 25th, 26th, 1923., in New Orleans, La.

The Kansas Medical Society held its Fifty-seventh Annual Meeting in Kansas City, Wednesday, Thursday and Friday, May 2nd, 3rd and 4th, 1923. The guests of Honor were Drs. H. W. Woodruff, Joliet; Geo. J. Musgrave, Chicago; V. C. Hunt, Rochester; W. A. Pusey, Chicago; J. E. Rush, Field Director, American Society for the Control of Cancer, New York; Howard Plank, Chicago.

The Nebraska State Medical Association held its Fifty-fifth Annual Convention in Lincoln, May 15, 16, 17, 1923, at the Lincoln Hotel. The Guests of Honor were Drs. J. B. Herrick of Chicago, Ill., and A. E. Hertzler, Kansas City, Mo.

Dr. Henry C. Whelchel, of Douglas, Ga., wishes to thank the fellows of the Medical Association of Georgia for the honor conferred upon him in Savannah during the Annual Meeting there.

A check for \$21,000.00 was received May, 25, 1923, by superintendent Steve R. Johnston, of Grady Hospital, from Jacob Elsas, well-known Atlanta capitalist and philan-

thropist, as the initial payment on a \$50,000.00 donation for the founding of an outdoor clinic for Grady Hospital.

A letter of commendation for the high type of work being done at Grady Hospital was received by Steve Johnston, Superintendent of the hospital, from the American College of Surgeons, of Chicago, following the annual investigation to report on the work being done by public hospitals in the United States.

Laurens County Medical Society reports the following officers for 1923:

President, Dr. J. W. Edmondson,
Vice-President, Dr. W. C. Thompson,
Secretary, Dr. O. H. Cheek,
Delegate, Dr. J. J. Barton,
Alternate, Dr. J. E. New,

Two appointments, for terms of six years each, were made to the State Board of Health by Governor Hardwick. Dr. Charles H. Richardson, of Macon, was named to succeed himself from the sixth district, and Dr. Fred D. Patterson, of Cuthbert, was named to succeed Dr. A. L. Crittenden, of Shellman, from the third district.

Dr. Linwood M. Gable, of Griffin, Ga., has been awarded the silver star decoration through the war department in recognition of the heroism for and gallantry displayed by him in action in France, July 30, 1918, and Belgium, October 27, 1918, while serving in the 26th Division in the World War. Dr. Gable was also awarded the British military cross in May, 1918, while attached to the British Forces.

Dr. H. W. Clements left last week for Chicago to take post-graduate work.

Mr. John Archbold, of New York, who has a winter residence in Thomasville, Ga., has announced the plans of an erection of an eighty bed hospital, as a memorial to his father, the late John D. Archbold.

ABOLITION OF COCAINE

The following communication appeared in the London Times of March 24. The authors, Sir W. M. Bayliss and Dr. C. W. Saleeby, are among the best known medical authorities in Great Britain. This letter is of interest in this country as showing the attitude of physicians in England towards the narcotic situation there, and particularly to cocaine. It is also of interest to note that credit is given to American research for the discovery of a safe substitute for cocaine.

To The Editor of The Times

"We submit that the abolition of the use of cocaine by international action is the only effective means of ending the evils to which this drug gives rise, and this is now feasible without detriment to any department of surgical practice.

The failure, everywhere, of all past or present methods of control is acknowledged. One of us has recently observed, in Montreal, the futility of the combined efforts of the police, the health authorities and the Customs officers, and he has returned to Europe to find similar failure alike in this country and in France. Montreal, it may be noted, is the headquarters for the illicit distribution of the drug in North America. It is evident, and for evident reasons, that so long as the drug is manufactured it will be misused. In the light of the experience of other countries, we are entirely sceptical of the success of the new legislation proposed by the Home Office.

The Committee on the Use of Cocaine in Dentistry reported in 1917 (Cd. 8489), suggested further restrictive legislation. One of the present writers serving on that Committee, did not sign the report, but appended a memorandum in which the view was expressed that, according to the evidence of leading dental surgeons, cocaine was no longer needed in dentistry, completely effective substitutes, such as procaine, being available.

A new synthetic substitute, known for short as "butyn" has now been prepared in Chicago, and tested widely with very good results. Like procaine, it has no action on the central nervous system. A highly favorable report on its use in ophthalmic practice appeared in the British Medical Journal for January 13, last. Its introduction completes the argument advanced in 1917.

International action should, therefore, be taken to end the present manufacture of cocaine in Germany and Sitzerland or elsewhere, and the cultivation of the coca plant in Peru, Java, Bolivia and other countries. The best instrument for such action, given an instructed and active public opinion in the various countries concerned is the Opium Committee of the League of Nations. Though neither the United States nor Germany is as yet a member of the League, both of these countries are represented on the Opium Committee. We urge that our Government should give full and cogent instructions in this sense to Sir Malcom Delevigne, the British representative on that Committee, prior to its next meeting in May. This, we are convinced, is the only way with cocaine.

We are, Sir, yours,
W. M. BAYLISS
C. W. SALEEBY.

Dr. S. A. Boland announces the removal of his office from Clearmont, Ga., to Cornelia, Ga.

NURSING EDUCATION HAS ARRIVED

The Rockefeller Foundation has granted a \$500,000.00 endowment to Yale University to establish a Department of Nursing and Health. Miss Ann Goodrich is to be the Dean of this department.

Mrs. Chester Bolton, who has been for many years a great friend and benefactor to Public Health Nursing, has given a \$500,000.00 endowment to Western Reserve University at Cleveland for the Department of Nursing and Health.

Peabody College is raising for its Department of Public Health Nursing an educational fund of \$400,000.00.

DR. SWINT HEADS COMMITTEE

Dr. R. C. Swint, superintendent of the state sanitarium, at Milledgeville, has been appointed chairman of the committee on organization of the State Mental Hygiene Association, by ex-Governor Hugh M. Dorsey, its president. Dr. Swint will have general charge of the development of clinics to be held throughout the state.

EXHIBITS

The exhibits for our Annual meeting at Savannah this year were unusually good. It was estimated that the exhibits on display were worth \$300,000.00. We feel that this is a credit to any State Association. With the high class of exhibits on display and the way presented by the Representatives went far towards making this our best Annual meeting. The following is a list of the exhibitors:

I. Surgeon Selling Co., 65 Forrest Ave., Atlanta, Ga., Representative, Dr. R. H. Enzor, 65 Forrest Ave., Atlanta, Ga.

II. The Max Woche & Son Co., 23 West Sixth St., Cincinnati, Ohio. Representative, Dr. Eugene B. Elder, Southern Representative, 570 North Boulevard, Atlanta, Ga.

III. American Institute of Medicine, 13 East 47th St., New York, N. Y. Representative, S. J. McCracken.

IV. The Upjohn Co., 7th Ave. & Bedford St., New York City, N. Y. Representative, Wade Woodward and H. P. Underwood.

V. Wappler Electric Co. Inc., 318 Atlanta National Bank Bldg., Atlanta, Ga. Representative, Fredrick Schoeck, Sales Agent.

VI. Cameron's Surgical Specialty Co., 110 W. Oak St., Chicago, Ill. Representative, W. J. Cameron, Pres.; M. H. Wodlinger, 42 West Union St., Jacksonville, Fla.; W. G. Harris, Montgomery, Ala.

VII. Keasbey & Mattison Co., Ambler Pa. Representative, Graham Wright, Talladega, Ala.

VIII. Victor X-Ray Corp., 236 S. Robey St., Chicago, Ill. Representative, E. A. Long 77 Forrest Ave., Atlanta, Ga.

IX. Acme International X-Ray Co., Chicago, Ill. Representative, V. A. Guyer, 312 Masonic Temple, Jacksonville, Fla.

X. Wached's Physician Supply Co., Savannah, Ga.

XI. Laurence Everhart, 120 Spring St., Atlanta, Ga. Representative, D. W. Walker.

XII. The Horlick's Malted Milk Co., Racine, Wisconsin. Representative, Paul S. Schroeder.

XIII. The Denver Chemical Mfg. Co., 20 Grand St., N. Y. City. Representative, Thos. F. Newman.

XIV. C. V. Mosley Co., 508 N. Grand Ave., St. Louis, Mo. Representative, J. W. Butler, 607 Biloeu Bldg., Jacksonville, Fla.

XV. Swan-Myers Co., Indianapolis, Ind. Representative, J. W. Tinder, M. D., 2738 Blvd. Place, Indianapolis, Ind.

XVI. Thompson Plaster Co., Montgomery, Ala. Representative, W. G. Harris, Agt.

XVII. Perryman-Burson Co., 23 Houston St., Atlanta, Ga.

XVIII. J. A. Majors Co., 1301 Tulane Ave., N. O. Representative, Dr. Ira J. Haynes, Box 257, Atlanta, Ga.

XIX. The Kelley-Koett Mfg. Co., Covington, Ky. Representative, Edwin C. Hill, 305 Atlanta National Bank Bldg., Atlanta, Ga.

NEW AND NONOFFICIAL REMEDIES

Tincture No. 111 Digitalis—P.D. & Co.—A fat-free tincture of digitalis which, standardized by the minimum lethal dose frog heart method of Houghton, is 50 per cent. stronger than tincture of digitalis-U. S. P. The actions and uses of tincture No. 111 digitalis-P.D. & Co. are the same as those of tincture of digitalis. It was introduced at a time when the "fat" of digitalis was believed to cause gastric disturbances. This claim of superiority is not tenable and the preparation is sold simply as a standardized tincture of digitalis. To minimize deterioration through light and air, the preparation is marketed in one ounce amber vials and saturated with carbon dioxide. Parke, Davis & Co., Detroit, Mich. (Jour. A. M. A., April 7, 1923, p. 1003.)

Carbon Tetrachloride Medicinal.—Carbon Tetrachloride has narcotic and anesthetic properties somewhat similar to those of chloroform. It has recently come into use as a vermifuge in the treatment of hookworm disease. It also removes some intestinal parasites other than the hookworm. It is reported that usually about 95 per cent. of the hookworms are removed by the first dose. Its use appears to be relatively safe, but serious symptoms and even death have been reported. It is administered in water, milk or gelatin capsules on an empty stomach, followed by a purgative dose of magnesium sulphate.

The dose is from 2 Cc. to 3 Cc. (30 to 45 minims) for adults. Carbon tetrachloride is a heavy liquid, having an odor somewhat like that of chloroform. It is almost tasteless and almost insoluble in water.

Carbon Tetrachloride Medicinal—M.C.W.—A brand of Carbon Tetrachloride Medicinal—N. N. R. Mallinckrodt Chemical Works, St. Louis.

Carbon Tetrachloride C.P.—P.W.R.—A brand of Carbon Tetrachloride Medicinal—N.N.R. Powers-Weightman-Rosengarten Co., Philadelphia. (Jour. A. M. A. April 21, 1923, p 1143.)

Modified Pneumococcus Vaccine.—A vaccine or "antigen" prepared by digesting a suspension of pneumococci, types 1, 11, 111 and Group 4 at 37 C. until about 95 per cent. of the organisms have become gram-negative and the mixture is relatively nontoxic to guinea pigs. It is believed that this method yields a vaccine with greater protective power. There is some evidence that this vaccine is of value in the treatment of lobar pneumonia. It is not intended for prophylactic use.

Pneumococcus Antigen-Lilly.—A modified pneumococcus vaccine—N.N.R. It is marketed in 5 Cc. vials, each Cc. containing twenty billion partially autolyzed pneumococci. Eli Lilly & Co., Indianapolis, Ind. (Jour. A. M. A., April 21, 1923, p. 1143.)

Sulpharsphenamine—Squibb.—A brand of sulpharsphenamine—N.N.R. (See Jour. A. M.A. March 31, 1923, p. 919) It is supplied

in ampules containing respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm., and 0.6 Gm. E. R. Squibb & Sons, New York City. (Jour. A.M.A., April 21, 1923, p. 1143.)

Neo-Silvol.—A compound of silver iodid with a soluble gelatin base containing 18 to 22 per cent. of silver iodid in colloidal form. Neo-silvol, even in concentrated solutions, causes neither irritation of mucous membranes nor coagulation of albumin. It does not stain the skin. It is claimed that neo-silvol in laboratory tests for germicidal value has been found as effective as phenol in its action on bacteria. Neo-silvol is intended for the prophylaxis against, and treatment of infections of accessible mucous membranes and is claimed to be indicated in affections of the genito-urinary tract and of the eye, ear, nose and throat. Parks, Davis & Co., Detroit, Mich. (Jour. A.M.A., April 28, 1923, p. 1218.)

Phenoltetrachlorphthalein—H.W. & D.—Adibasic dye formed by the condensation of phenol and tetrachlorphthalic acid or its anhydride. Phenoltetrachlorphthalein has been used for the determination of the functional output of the liver. It can be used, in the form of the sodium salt, intravenously, but cannot be given subcutaneously or intramuscularly. The substance may also be obtained in the form of Ampules Phenoltetrachlorphthalein containing a solution of disodium phenoltetrachlorphthalein. Hynson, Wescott & Dunning, Baltimore, Md. (Jour. A.M.A., April 28, 1923, p. 1218.)

PROPAGANDA FOR REFORM.

Alcohol and disease.—Recently a statistical report regarding the possible influence of alcohol on the prognosis of pneumonia in a large municipal hospital has been published. The data for nearly 3,500 cases of lobar pneumonia showed that, with reference to the patient's habits of indulgence in alcoholic drinks, that the mortality was higher in moderate users than in light users or abstainers, and that the mortality is much higher in excessive users than in moderate users. It must be borne in mind, however,

that these statistics have no bearing on the use of alcohol in therapy. (Jour. A.M.A., April 7, 1923, p. 1007.)

Incompatibility of mercurochrome—220 soluble with local anesthetics and alkaloids.—An accident from the precipitation of mercurochrome—220 soluble by procain has been reported. The A.M.A. Chemical Laboratory has confirmed the incompatibility. The following local anesthetics were found to give precipitates when treated with mercurochrome-220 soluble solution; alypin, apothetin, benzocain, butyn, cocain hydrochlorid, B-eucain lactate, phenacain, procain, propaesin, quinin and urea hydrochlorid, tropacocain hydrochlorid and stovain. Many vegetable alkaloids were also found to be incompatible with mercurochrome-220 soluble. (Jour. A.M.A., April 14, 1923, p. 1091.)

A rapidly eliminated digitalis body.—At the request of the Council on Pharmacy and Chemistry, Dr. R. A. Hatcher undertook to elaborate a digitalis preparation that would be stable, that would contain a definite amount of the readily absorbable principle and that would be suitable, if possible, for intravenous administration. As a result of his work he has isolated a digitalis body which behaves unlike any constituent of digitalis heretofore described. A nearly fatal dose is eliminated within a few hours after its introduction into a cat. It remains to demonstrate the therapeutic value of this new digitalis preparation through the cooperation of the clinician and the pharmacologist. The intravenous administration of digitalis is rarely necessary if digitalis is properly given by mouth. For rare cases in which intravenous medication administration is indicated, it appears that Dr. Hatcher has prepared a drug whose action is less persistent than other digitalis preparations now available and which is simply and inexpensively prepared. (Jour. A.M.A., April 14, 1923, p. 1072.)

Nephritin (Reed and Carnrick) was reported on by the Council on Pharmacy and Chemistry in 1907. The following is a summary of this report: The advertising claims

for Nephritin are based on the theory that certain granules in the renal cells, called "grains of segregation" and claimed to have been observed microscopically, carry on the secretion of urinary constituents and that a deficiency of them is the cause of nephritis. While Renaut, who formulated the theory, recommended as a cure for nephritis the maceration of fresh kidneys in physiologic sodium chlorid solution, Reed and Carnrick urged objection to the maceration and explained that nephritis represents all the action of the maceration, but is fifty times as potent. Nephritin is stated to be "the grains of segregation from the cortex of the pig's kidney, the renal connective tissue being eliminated." It appeared impossible that the microscopic structures claimed to be present in nephritin could be isolated as such from the connective tissues, and, on inquiry by the Council, no information on this point was to be had. Further, the firm presented no evidence for the claimed action of nephritin or for the claim that it was fifty times stronger than the maceration. (Jour. A.M.A., April 21, 1923, p. 1167.)

The treatment of syphilis.—The general view is that neither mercury or arsphenamin positively cures in cases in which the disease has existed long enough to become well established as a systemic disease, but that they both tend to cure and that both are valuable in treatment. It is the general opinion of syphilologists that when chancres are seen that are unmistakable, these cases should be vigorously treated and that there is a good chance of aborting the disease at this time. If early cases are not treated until the Wassermann reaction has become positive, there is a difference of opinion as to treatment. There are syphilologists who believe that these early cases are better treated by mercury alone until the patient has had an opportunity to develop all the immunity of which he is capable. After the patient has established all the resistance of which he is capable, these syphilologists would treat with mercury and arsphenamin. It is becoming increasingly apparent that the advantages of the new method of treating sy-

philis in which arsphenamin plays the larger part, are by no means certain. The trend of the last few years has been in the direction of placing more reliance on mercury and the older methods in the treatment of syphilis. (Jour. A.M.A., April 21, 1923, p. 1167.)

DOES SCHOOL WORK IMPAIR HEALTH?

Many events in connection with human life are determined on a chronological basis solely with respect to the age of the individual concerned. In at least two of these it must seem somewhat strange, on careful consideration, to find that chronological rather than physiologic age has so often been made the basis for features of great importance in human experience. In many states the law carefully defines the age below which children may not leave school to engage in wage-earning labor. Thus, the problem of child labor is settled, in practice, on the basis of age, without necessary reference to the biologic or other fitness of the young worker concerned. The minimal standards for children entering employment, as formulated in a report (1) of the Children's Bureau Conferences in 1919, refers frequently to minimal ages for a variety of employment demanding varying degrees of physical endurance and skill. Everywhere one reads of an age minimum, although a novel addendum is found in the suggestion that a child shall not be allowed to go to work until he has had a physical examination by a public health physician and has been found to be of normal development for a person of his age, and physically fit for the work at which he is to be employed. It will mark a great step in advance when fitness to engage in manual labor or in other sorts of tasks at the end of a normal school life shall be based on the physiologic and mental equipment of the person concerned, as much as on the number of years that have elapsed since his birth.

A second event in which, all too often, years rather than physique and personality seem to be principles guiding to decision, involves the time in life at which

children should begin their school work. We have no desire to enter into the debate as to when the pre-school days should end. Certain facts in reference to the arguments often advanced deserve, however, to be known. It is frequently stated that the acceleration of the educational process through school attendance may in the long run be detrimental rather than otherwise. In other words, this concerns the question whether it would be better for the health of most children if they were not sent to school when the law says they are old enough to go, but were kept out until they are older. As the views entertained by both physicians and educators have usually represented personal opinions based on unsubstantiated impressions or chance observations, the U. S. Public Health Service (2) has conducted investigations bearing directly on the subject. A study of the school children in a typical American community has shown that the work of the elementary grades had little, if any, adverse effect on the pupils' weight. Of the children who entered the schools up to the standard of weight in the fall, remarkably few were underweight in March. This was observed entirely irrespective of the age of the pupil, the underage child making as good a showing as the normal age or overage child. Sterling (2) concludes that parents need not hesitate to send a healthy child to school at the age of 6, which was the entrance age of the school studied. When the investigator regards it as plain that school life, apart from detrimental influences which may exist in the home environment, is not ordinarily a menace to the child's state of nutrition, good sense seems to be adequately supported by a critical inspection of existing school conditions. Such justified generalizations cannot fail to be a helpful guide to him who may be the chief guide and counselor as well as physician in many families.—

It is evident, accordingly, that the problem of prophylaxis hinges in no small measure on the theory of the pathway of infection. Despite the persistent uncer-

tainty about the theory of phthisiogenesis, the importance of which should not be underrated, it is gradually becoming possible to express the results of the modern treatment of tuberculosis in tangible statistics. A recent compilation (3) of what has been accomplished at the Mount McGregor Sanatorium shows in a surprising way the outcome of a six-year attempt to rehabilitate tuberculosis employees. Out of the 896 patients who were discharged from the beginning up to Dec. 31, 1920, and on whom a report was available as of Dec. 31, 1921, 719, or 80 per cent., were known to be at work; ninety, or 10 per cent., were unable to work, and eighty-seven, or 10 per cent., were dead. As might be expected, such data will vary with the condition of the patients on admission, a factor with which the ability to keep at work after discharge varies directly. The figures cited are not presented here as something exceptional, but rather to re-emphasize the degree of success which the management of the tuberculous is meeting at the present day.—*Jour. A. M. A.*, Dec. 30, 1922.

1. Landis, H. R. M.: Tuberculosis, the Oxford Medicine 5:263.

2. Ople, E. L.: Phthisiogenesis and Latent Tuberculosis Infection, *Am. Rev. Tuberc.* 6:525, Sept., 1922.

3. Howk, H. J.: Dublin, L. I., and Knudsen, I. A.: The After-History of 953 Tuberculosis Patients Discharged from the Metropolitan Life Sanatorium from 1914 to 1920, *Am. Rev. Tuberc.* 6:207, Oct., 1922.

DEATHS OF PHYSICIANS IN 1922.

During 1922, the deaths of 2,513 physicians in the United States were recorded in *The Journal*. Adding 3 per cent. to this number on account of delayed reports and possible omissions, we estimate the total number of deaths as 2,588. On an estimate of 146,000 physicians in the United States, this is equivalent to an annual death rate of 17.73 per thousand. The average annual mortality rate for the period from 1902 to 1922, inclusive, was 15.52.

Ages.—Of the 2,480 decedents whose age was stated, thirty-one were under 30; 149 between 31 and 40; 360 between 41 and 50; 536 between 51 and 60; 661 between 61 and 70; 531 between 71 and 80; 177 between 81 and 90, and thirty-five between 91 and 100. The greatest number of

deaths for a given age occurred at 66 years, at which age eighty-eight deaths were noted.

Causes of Death.—Of the 2,449 known causes of death, 509 were diseases of the heart and circulatory system. General diseases accounted for 344 deaths; of these 154 were from carcinoma and sarcoma, 44 from diabetes mellitus; 39 from septicemia, 37 from tuberculosis; 21 from anemia, 3 from typhoid fever and 46 from other diseases. Cerebral hemorrhage caused 234 deaths; paresis, 31; meningitis, 19; neuritis, 3; epidemic encephalitis, 5; and brain tumors and other diseases of the nervous system, 45; pneumonia claimed 180 victims; influenza, 19; bronchitis, 5, and other diseases of the respiratory system, 35. Appendicitis caused 36 deaths; acute indigestion, 15; cirrhosis of the liver, 11; strangulated hernia, 10; biliary calculi, 8; gallstones, 4, and other diseases of the digestive system, 30; Chronic nephritis accounted for 125; uremia, 38, and other diseases of the genito-urinary system, 18. Various diseases of the bone caused 4 deaths; senility, 456; sequels to operations, 93; and 22 deaths were due to complications not specified.

Accident and Homicide.—The causes and distribution of the 125 deaths from accident were: automobile-railway (grade crossing), 23; automobile, 39; firearms, 9; drowning, 7; street cars, 5; poison, roentgen-ray burns, falls, sleigh, lightning, collapsing roof and electrocution accounted for the remainder. The fifteen homicides were all due to firearms; of these, four physicians were shot by bandits, one by a maniac, and one by a nurse.

Suicide.—The fifty-six physicians who ended their lives by suicide selected these methods: firearms, 29; poison, 13; jumping from high places, 3; cutting instruments, 3; drowning, 3; asphyxiation, 2, and strangulation, 3.

Civil Positions.—Among the decedents who had held civil positions, one had been state governor; two United States consuls; 40, members of the state legislature; 29 mayors of cities; 99, members of boards

of health; 63, members of boards of education; 12, members of state boards of medical examiners; 6, postmasters; 4, police commissioners; 41, coroners; 4, bank presidents; 96 were veterans of the World War; 116, veterans of the Civil War; 8, missionaries, and 8, clergymen. Two past presidents of the American Medical Association died, four vice-presidents, and the secretary; also, twenty-two former presidents of state associations.—*Jour. A. M. A.*, Jan. 6, 1923.

BOOKS RECEIVED

THE SURGICAL CLINICS OF NORTH AMERICA

The New York Number, April, 1923

The Surgical Clinics of North America (Issued serially, one number every other month). Volume III, Number 2, (New York Number, April, 1923). 286 pages with 159 illustrations. Per Clinic year (February 1923 to December, 1923). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London; W. B. Saunders Company.

W. B. SAUNDERS COMPANY.

Philadelphia

London

"Nursery Guide-for Mothers and Nurses," by Louis W. Sauer, M. S., M. D., senior attending Pediatrician, Evanston Hospital; formerly attending physician Chicago Infant Welfare, and Assistant attending physician Children's Memorial Hospital, Chicago.

187 pages, price \$1.75, published by C. V. Mosby Co., St. Louis.

"Inflammation in Bones and Joints", by Leonard W. Ely, M. D., Associate professor of surgery, Stanford University.

425 pages, 144 illustrations, price \$6.00, published by J. B. Lippincott Co., Washington Square, Philadelphia.

"The FORM and Functions of the Central Nervous System", by Fredrick Tilney, M. D. Ph. D., Professor of Neurology, Columbia University; attending Neurologist, the Presbyterian Hospital, and the New York Neurological Institute, consulting Neurolo-

gist, Roosevelt Hospital, New York and Henry Alsop Riley, A. M., Md. Associate in Neurology, Columbia University, Associate attending Neurologist, New York Neurological Institute, New York, Neurological Institute, attending physician, Neurological Department, Vanderbilt Clinic, New York. Foreword by George S. Huntington, ScD., M. D., professor of Anatomy, Columbia University.

Second Edition, 591 figures containing 763 illustrations of which 56 are colored. Published by Paul B. Hoeber, New York.

Wanted: Traveling Selling Position open to physician of good appearance and previous selling experience. Please write—don't call—State age, experience and compensation desired.

Surgical Selling Company,
65 Forest Ave. Atlanta, Ga.

WANTED—Two graduate resident interns at Davis-Fischer Sanatorium. Apply for information to Dr. E. C. Davis, 25-27 East Linden Ave., Atlanta, Ga.

Wanted: A physician to locate at Bonaire, Ga., Houston County, 21 miles south of Macon, General practice. Good opening, Good School, churches, etc., good roads. Communicate with undersigned or come look situation over.

W. B. Willis,
Bonaire, Ga.

MARRIAGE

Miss Helen Lucile Johnson to Dr. Charles Edward Lawrence, Wednesday, June 6th at 563 Ponce de Leon Ave., Atlanta.

OBITUARY

Dr. Tandy Key Mitchell, Lawrenceville, Ga., age 91, died April 16, 1923.

Dr. Geo. Fredrick Payne, age 70, died April 19, 1923, at his home—50 Bonaventure Ave., Atlanta, Ga.

Dr. D. M. Buchan, age 75, died March 22, 1923, at his home in Wray, Ga.

Dr. L. P. Eberhardt, age 54, died at his home at Elberton, Ga., March 27, 1923.

Proceedings of the 74th Annual Meeting of The Medical Association of Georgia, Savannah, Ga., May 2, 3, 4, 1923

FIRST GENERAL MEETING

Wednesday, May 2, 1923

The Association met at 10 A. M. and was called to order by President, Dr. J. M. Smith, Valdosta.

Prayer was offered by the Rev. Neal F. Anderson, D. D., Pastor of the Independent Presbyterian Church.

In the absence of Honorable Paul Seabrook, Mayor of Savannah, Mr. Gordon Saussy, of Savannah, was introduced and delivered the following:

ADDRESS OF WELCOME

Mr. President and Members of the Medical Association of Georgia: Our Mayor is out of the city and I received a notice to take his place, and so I am here today to bid you a hearty welcome to the City of Savannah.

In bidding you welcome to Savannah, the Mayor, the Council and other authorities have told me that the key to the city is so large that it would take a truck to deliver it to you. We invite you to look us over, and if there is anything here you want it is yours. Do whatever you please and go where you please.

Now comes that part of my speech that I have permission to make. In the last five or six years one of the propositions that has been engaging the attention of the State of Georgia is the industrialism of Georgia. I am the Chairman of one of the big central committees of the State. There are five factors involved in the industrialization of Georgia, raw material, transportation, markets, power and man power.

We are no longer the Empire State of the South. There is not a physical fact about the State of Georgia that is not known in Washington. The Department of Commerce and the Bureau of Census in Washington know everything about us, and capital, before it invests money anywhere in Georgia, sends its engineers to Washington to get the facts.

The result of work done in preventing malaria has been so wonderful that I have been requested to make that topic a basis for speeches to be delivered in various sections of our state. I am charged to bring about a better handling of preventable communicable diseases, and the one from which we suffer most is malaria. I wish to direct your attention to what has been accomplished by the chief surgeons of the Central of Georgia Railroad and his assistants. He has given a short summary of the results obtained by him in his efforts at malarial control. We have a law that is effective during certain months of the year and certain of the big transportation companies were anxious to have the law repealed. It has developed that my vote in the Council was necessary to either repeal the law or keep it.

Now, I am not an expert, but you of the medical profession are scientists. You do not speculate to a conclusion. You know. They tell me that as a result of the information obtained by doctors in Savannah you have invited the cooperation of the United States Public Health Service to start with malarial control in this city. The law I have referred to was repealed. As the result of the wonderful work of the Chief Surgeon of the Central of Georgia Railroad and his assistants, I have been requested to make that as a basis of a talk along that line.

Gentlemen, Georgia can never develop industrially until you men who know go out into the country and convince the authorities who administer the affairs of this state that it takes dollars and cents to wipe out communicable, preventable diseases. You men can go out into the different sections of the State of Georgia and make any community of people so disreputable in the opinions of men that they will not refuse to live to your rules and regulations or to expend the money you recommend toward the pre-

vention of absolutely preventable diseases. I think it is the greatest work you men can accomplish in the State of Georgia today. The State of Georgia spends three cents per capita for health purposes every year. That is every bit of money the people of Georgia spend. I am making a tremendous effort to have the counties cooperate with the state. The State of Georgia spends \$91,000.00 a year for the three million people of the state, which is the lowest of any state. It is outrageous. On the other hand, North Carolina spent tremendous sums to accomplish this purpose, and North Carolina has the advantage over Georgia in the number of people entering the respective states during the past two years, North Carolina having gained 49,000 strange white people and Georgia only 29,000. You men have the power in your hands to make or unmake Georgia industrially. You have the markets, you have the transportation, and you have the power. Your help will be 60 per cent. efficient because of what is an absolutely preventable thing. I could go out and talk myself black in the face to the people in the State of Georgia and they would say "he is one of those lawyers," and we want experts to come and talk to us. Man power is the greatest factor. I need not call your attention to the Panama Canal where a malarial campaign was undertaken by which the disease was wiped out from the Canal Zone. With the assistance of the United States Public Health Service and the Rockefeller Foundation, there is something wrong with the State of Georgia if we cannot do as well as they did in Panama.

Dr. Herman W. Hesse, President of the Georgia Medical Society, delivered the following address of welcome on behalf of the medical profession:

ADDRESS OF WELCOME BY DR. HESSE.

Mr. President and Members of the Medical Association of Georgia:

It is a pleasant duty and a personal privi-

lege to welcome you, members of the Medical Association of Georgia, who are at the same time our guests and our friends, to the hospitalities of our beautiful and beloved city.

The Chatham County Medical Society has waited long for your coming with most pleasurable anticipations of fostering the many pleasant relations of companionship that we have had with those of you who in the past have delighted us with your presence and to the promotion of new bonds of fraternity with those who for the first time partake of our hospitality.

In the Name of the Chatham County Medical Society, "to thee and thy company I bid a hearty welcome." Welcome to our hearts, our homes and our city.

We are fortunate in having you with us at this time of the year, for while Savannah is beautiful at all seasons it is in the lovely month of May that, bedecked in her garlands and her flowers, that she is fairest of all cities. She has arrayed herself in her loveliest of spring attire for your coming and stretches her arms to welcome you. The gentle zephyrs from old Atlantic, catching the perfume of the marshes of Chatham that stretch between, kiss your cheeks in passing and whisper to you, if you will catch their dulcent murmurings, that they are glad that you have come back to us. The vernal sun, beaming more softly now than all the year, when so late his face was by Winter's clouds obscured, smiles a benediction on your presence. The mocking bird loudly sings his roundelay of joy to proclaim that all nature joins in the welcome to the stranger within our gates.

We, of Savannah, are proud of our reputation for hospitality. In the days that are gone "when the mint was in the liquor and its fragrance on the glass breathed a recollection that can never, never pass; when we reveled in the glory that we thought could never pass, and we lingered at the julep in the ever brimming glass," we were advertised by our admiring friends. Our hospitality has always been dispensed in accordance with prevailing customs and liberties. We have shared with our guests those things which for centuries upon centuries have de-

lighted the hearts of men. But why alloy the pleasures of the hour with repining for the things that cannot be. Inexorable law has decreed that no more can we "fill the cup that clears today of past regrets and future fears." "Ah, could you and I conspire to grasp this sorry scheme of things entire, would not we scatter it to bits and then remold it nearer to the heart's desire."

I am reliably informed that to this old town the Sahara days have come. That there is no oasis in the trackless desert, no "hām in Gilead." That the fierce denizen of the jungle with beautiful striped coat of fur of the genus feline and with complete loss of ocular function has no habitat here. But in spite of this gloomy outlook for conviviality we hope that your short stay with us will be most pleasant. To this end the members of the Chatham County Medical Society pledge you the true quality of Savannah hospitality. We desire that when you return to your homes that you will take with you the lasting memories of this convention, and that you will come back again and again to the Forest City where you will always find a welcome cordial and sincere.

The response to the addresses of welcome was made by Dr. A. J. Mooney, of Statesboro, who said:

Mr. President and Members of the Medical Association of Georgia: The words of welcome of Mr. Saussy and Dr. Hesse far exceed anything I shall have to say, but I thoroughly appreciate the heartfelt words of welcome that have been extended to us. Many of us have pleasant memories of the meetings that were held in Savannah in 1913 and in 1918.

Gentlemen, permit me not only to respond to the address of welcome but to introduce to you the character of the men who are our visitors today. They have traditions back of them.

When the fight for sanitation was on years and years ago, who were the leaders? The medical men of Georgia. When advancement in any line occurred in the country, the

medical men of Georgia were the first to recognize it.

I really believe that no medical meeting should be held in Georgia without mentioning with reverence the name of Crawford W. Long, and as the years go by I am sure his name will be revered more than ever.

The medical men of Georgia are modern. They are circumspective; there is a sympathetic interest and understanding between themselves and their patients. They are honest with their patients. They understand their own limitations. They can apply or have applied the very latest scientific methods, and by the application of those methods lives are and can be saved. They have learned to keep a proper respect for themselves and their clientele, and they bear in mind always the fact that they are the heirs to the same ills as their patients.

When we enter the New York harbor we all have seen the grand old Statue of Liberty, welcoming us to the shores of America. Savannah, my friends, is something that means as much to us. It is a city where the ocean breezes blow and to us it is expressive of words of welcome. We carry away with us, we bring with us pleasurable anticipations of this meeting. We are glad to be here, and we shall carry back with us pleasant recollections of the meeting of 1923. As we sit around our warm firesides and use the treasure box of memory, you may rest assured that the 1923 meeting of the Medical Association of Georgia in Savannah will stand par excellence. (Applause.)

REPORT OF THE COMMITTEE OF ARRANGEMENTS.

Dr. W. R. Dancy, Chairman, made the following verbal report: The entertainment for the physicians consists mainly of a trip to Tybee tomorrow afternoon after the scientific session here has been completed. On reaching Tybee, those who desire to do so, may take a surf bath. At 8 o'clock the banquet will be given at the Tybee Hotel, and at this banquet we shall have an address by our guest, Dr. Louis M. Warfield, of Ann Arbor, Michigan, on "Some Tendencies in Modern Medicine."

At the close of Dr. Warfield's address Dr. Hesse will present the "Badge of Service" to the President, Dr. J. M. Smith.

The entertainment for the ladies is in charge of the doctors' wives of Savannah. A ladies banquet will be held at Tybee at the same time as that of the physicians banquet, but in a different room. The ladies will be further provided for in that there will be an entertainment at the Golf Club, and the ladies are to be taken there in automobiles this afternoon at 4:30, where a reception will be held.

Tomorrow the visiting ladies will be given a luncheon at one of our suburbs, preceded by an automobile ride. They will go to Tybee the same afternoon.

The Golf Club has extended an invitation to all physicians to use the golf links while here.

The local medical society has made these arrangements and we trust they will be acceptable and that you will be pleased with them. We hope you will not only enjoy yourselves at this meeting, but will soon come again.

Dr. M. A. Clark, Parliamentarian of the Association, was introduced, and thanked the Association for the honor conferred upon him, and said he would try to be fair and impartial in his decisions and rulings, and expressed the hope that he would not take the office too seriously.

Dr. Clark moved that the official program of this meeting, as recommended by the House of Delegates, be adopted.

Seconded and carried.

1. Dr. E. C. Thrash, Atlanta, read a paper entitled "Unreported Methods and Experiences", which was discussed by Drs. Arch Elkin, Atlanta; George C. Mizell, Atlanta; L. C. Rouglin, Atlanta; L. G. Hardman, Commerce; Ralston Lattimore, Savannah; John W. Daniel, Savannah, and in closing by the essayist.

2. Dr. George L. Echols, Milledgeville, read a paper on "Extra Mural Psychiatry."

3. Dr. Newdigate M. Owensby, Atlanta, read a paper on "The Semi-Insane."

These two papers were discussed together by Drs. Ralston Lattimore, Savannah; E. Bates Block, Atlanta; M. A. Clark, Macon; L. G. Hardman, Commerce; T. P. Waring, Savannah; T. D. Walker, Macon; L. F. Lanier, Rocky Ford, after which the discussion was closed by the authors of the papers.

4. Dr. Lewis M. Gaines, Atlanta, read a paper on "A Study of Symptomatology in Neuro-syphilis."

This paper was discussed by Drs. Joseph Yampolsky, Atlanta; L. F. Lanier, Rocky Ford; Charles E. Dowman, Atlanta; Newdigate M. Owensby, Atlanta; Elton S. Osborn, Savannah, and in closing by the essayist.

5. Dr. T. P. Waring, Savannah, read a paper entitled "The Important Consideration of Ovarian Tumors of All Types."

Discussed by Drs. O. H. Weaver, Macon; E. A. Wilcox, Augusta; T. S. Jones, Jeffersonville; Lawrence Lee, Savannah; B. H. Wagnon, Atlanta, and in closing by the author of the paper.

On motion, the Association adjourned until 2:30 P. M.

FIRST DAY—AFTERNOON SESSION

The Association reconvened at 3 P. M., and was called to order by the President.

The President stated that the House of Delegates had recommended to change the order of the day in order to allow Dr. Hardman to present his paper, which was not on the program.

Dr. Thomas J. McArthur moved that the recommendation of the House of Delegates be concurred in.

Seconded and carried.

6. Dr. L. G. Hardman, Commerce, then read a paper on "Industrial Medicine and Surgery," which was discussed by Drs. Theodore Toepel, Atlanta; Thomas J. McArthur, Cordele; Thomas Chason, Donaldsonville; A. A. Smith, Hawkinsville; B. H. Wagnon, Atlanta, and in closing by the essayist.

Dr. Theodore Toepel moved that the subject-matter contained in Dr. Hardman's paper be referred to the House of Delegates for action with the endorsement of the general meeting.

Seconded and carried.

7. Dr. J. H. Buff, Atlanta, read a paper on "Use of Sutures in Tonsillectomies."

8. Dr. T. D. Walker, Jr., Macon, followed with a paper entitled "The Relation of Tonsils and Adenoids to Growth and Development of Children."

9. Dr. W. L. Champion, Atlanta, read a paper on "Recurrence of the Prostate."

On motion, the Association adjourned until 7:30 P. M.

FIRST DAY—EVENING SESSION

The Association reconvened at 8 P. M., and was called to order by the President.

10. Dr. J. E. Paullin, Atlanta, gave a talk on "Insulin in the Treatment of Diabetes Mellitus," his remarks being illustrated by numerous slides.

Dr. Paullin's remarks were discussed by Drs. John W. Daniel, Savannah, and V. H. Bassett, Savannah, after which the discussion was closed by Dr. Paullin.

11. Dr. Theodore Toepel, Atlanta, read a paper entitled "Importance of Early Recognition and Treatment of Weak Feet in Children."

Discussed by Drs. Francis M. Martin, Shellman; W. A. Mulherin, Augusta, and in closing by the essayist.

12. Dr. Montague L. Boyd and Dr. Earl Floyd, Atlanta, contributed a joint paper entitled "The Value of Pyelograms and Uretrograms in Obscure Kidney and Ureteral Lesions."

Discussed by Dr. H. Y. Righton, Savannah.

13. Dr. Joseph Yampolsky, Atlanta, read a paper entitled "A Review of 100 Cases of Congenital Syphilis."

This paper was discussed by Drs. Fred G. Hodgson, Atlanta; George L. Echols, Milledgeville; W. A. Mulherin, Augusta; J. L. Campbell, Atlanta; H. Gordon Huey, Homer-ville; L. C. Lanier, Rocky Ford; A. G. Fort, Atlanta, and in closing by the author of the paper.

On motion, the Association adjourned until 9 A. M., Thursday, May 3.

MAY 3—SECOND DAY—MORNING SESSION

The Association met at 9 A. M., and was called to order by Dr. E. T. Coleman, Graymont.

14. Dr. Stewart R. Roberts, Atlanta, read a paper entitled "Digitalis in Its Relation to the Classification of Heart Disease."

15. Dr. W. W. Jarrell, Thomasville, read a paper entitled, "A Consideration of the Kidney Function."

16. Dr. Charles E. Waits, Atlanta, read a paper entitled, "Multiple Stage Measures in the Surgical Management of Severe Hyperthyroidism."

17. Dr. C. W. Roberts, Atlanta, read a paper entitled "Pitfalls in the Management of Thyroid Disorders."

These two papers were discussed together by Drs. William A. Selman; Thomas Chason, Donaldsonville; T. C. Davison, Atlanta; John W. Daniel, Savannah; E. C. Davis, Atlanta; Charles H. Watt, Thomasville, and in closing by the authors of the papers.

Dr. V. H. Bassett, Savannah, introduced to the Association Dr. Louis M. Warfield, Professor of Medicine in the University of Michigan.

Dr. M. A. Clark moved that Dr. Warfield be extended the privileges of the floor by a rising vote.

Seconded and unanimously carried.

18. Dr. E. C. Davis, Atlanta, read a paper entitled "The Four Nightmares of the Abdominal Surgeon," which was discussed by Drs. L. C. Fisher, Atlanta; Walter Norton, Savannah; A. R. Rozar, Macon; George C. Mizell, Atlanta, and F. W. McRae, Jr., Atlanta.

President Smith presented Dr. A. A. Smith, of Hawkinsville, who presided at the Association meeting held in Americus, thirty years ago.

Dr. Smith thanked the Association for the honor and recognition accorded him.

The President, Dr. J. M. Smith, Valdosta, then delivered his address.

At the close of the address Dr. J. M. Anderson, Columbus, thanked Dr. J. M. Smith for his address.

19. Dr. Charles Usher, Savannah, read a paper on "Gastric and Duodenal Ulcer," which was discussed by Drs. David T. Heyser, Atlanta; Stewart R. Roberts, Atlanta, and in closing by the essayist.

Dr. Joseph P. Bowdoin, Adairsville, was accorded the privileges of the floor and presented the following communication in regard to the Use of Sulpharsphenamine.

I wish to call attention to a new arsphenamine derivative, which in my judgment is of great importance, one that places the treatment of syphilis in the easy reach of every physician, owing to the easy method of administration.

Dr. Carl Voegtlin (Vertlin), Professor of Pharmacology, United States Hygienic Laboratory, has been devoting much time and experimentation to perfect an arsphenamine that could be administered hypodermically. He, with his co-workers, J. M. Johnson and Helen Dyer, has succeeded, and the new remedy is sulpharsphenamine. They say that it appears to possess certain definite advantages over the arsenicals in use at present in the treatment and control of syphilis.

The simplicity of administration has made neoarsphenamine very popular; perhaps nine cases out of ten receive this remedy for this reason alone, therefore if a still more simple method can be used and the results remain as good or better, it is quite likely that it will become even more popular than the neoarsphenamine. I believe that such a remedy is the one just mentioned.

Professor Voegtlin (Vertlin) and his collaborators have this to say about this feature of it:

"Sulpharsphenamine is well tolerated when injected intravenously as is neoarsphenamine. Intramuscular injections of concentrated solutions cause some local reaction, which is, however, much less severe than that following similar injections of arsphenamine or neoarsphenamine. The principal advantage of sulpharsphenamine is that it can be injected subcutaneously

with impunity, provided that for full therapeutic doses the concentration is kept high (20 to 30 per cent.)"

The remedy has been given experimentally to find out its value as compared with arsphenamine and neoarsphenamine. They conclude that this drug is at least as effective as the same dose of arsphenamine.

"On the arsenic basis, sulpharsphenamine has, therefore, a higher spirocheticidal value than arsphenamine. Commander Powell, U. S. N. Medical Corps, informed us that one case of primary syphilis in a sailor treated with 0.4 grams of sulpharsphenamine showed complete disappearance of spirochetes from the chancre after twenty-four hours, an observation which is in harmony with what has just been stated."

They further say:

"We strongly emphasize that before this drug can be introduced for general use, it will be necessary to give it an exhaustive trial as to its curative power in human syphilis. There is no way to predict the outcome of this trial. The clinical studies especially will have to consider whether or not sulpharsphenamine has, for normal and syphilitic tissue, the same penetrating power as, or better than arsphenamine and neoarsphenamine.

"We suggest that sulpharsphenamine be given a clinical trial, particularly in patients with difficult accessible veins (adipose patients, infants), and cases which exhibit an unusual idiosyncrasy to intravenous treatment."

The common Luer hypodermic syringe is all you need in the way of instruments. Break the end off containing the sulpharsphenamine, draw up into the syringe about 8 drops of sterile water to each .03 of sulpharsphenamine, empty the 8 minims of water in your syringe into the ampule with the powder and let it dissolve. It makes a very stable solution and can set without injury for some time after mixing, just the opposite to the other arsenicals.

It is best to use the flanks between the scapulae or beneath the fat covering the buttocks as injecting points.

The price of the new preparation should be about the same as the neoarsphenamine, and will be put on the market by the different manufacturers of arsphenamine.

At this juncture, it was moved that the Association receive a report from the House of Delegates.

Seconded and carried.

Secretary Bunce presented a summary of the proceedings of the House of Delegates. (For particulars, see minutes of the House of Delegates.)

Dr. E. T. Coleman moved the adoption of the report. Seconded.

Dr. A. R. Rozar moved to amend that the report be adopted with the exception of that part calling for the appointment of a commission to study endocrinology.

The amendment was accepted, and the original motion as amended was carried.

On motion, the Association adjourned until 2:30 P. M.

SECOND DAY—AFTERNOON SESSION

The Association reconvened at 2:30 P. M., and was called to order by the Second Vice-President, Dr. A. R. Rozar, Macon.

20. Dr. Hugh N. Page, Augusta, read a paper on "Regional Anaesthesia," which was discussed by Drs J. L. Campbell, Atlanta; W. E. Person, Atlanta; W. A. Selman, Atlanta, and in closing by the essayist.

21. Dr. E. A. Wilcox, Augusta, read a paper entitled "A Clinical Study of Pelvic Inflammation in Women."

Discussed by Drs. J. M. Anderson, Columbus; E. C. Davis, Atlanta; B. H. Wagnon, Atlanta; Charles H. Richardson, Jr., Macon, after which the discussion was closed by the essayist.

On account of a crowded condition of the program, it was moved and seconded that papers be not discussed. Carried.

22. Dr. J. L. Campbell, Atlanta, read a paper on "The Present Status of the Cancer Problem."

23. Dr. Charles E. Dowman, Atlanta, read a paper entitled "Traumatic Cyst of the Brain."

24. Dr. Lawrence Lee, Savannah, read a paper entitled "A Report of Four Cases of Cicatricial Stricture of the Esophagus."

25. Dr. Charles H. Watt, Thomasville, read a paper entitled "Pyelonephritis with Report of a Case."

26. Dr. B. H. Wagnon, Atlanta, read a paper on "Sarcoma of the Back, with Report of Three Cases."

On motion, the Association adjourned until 9 A. M., Friday, May 4.

The banquet was held at the Tybee Hotel at 8 P. M., with Dr. Louis M. Warfield, Ann Arbor, Michigan, as guest of the Association, who delivered an address on "Some Tendencies in Modern Medicine."

At the close of Dr. Warfield's address, Dr. H. W. Hesse presented the badge of service to the President, Dr. J. M. Smith.

FRIDAY, MAY 4, 1923—MORNING SESSION

The Association met at 9 A. M., and was called to order by Dr. Thomas Chason.

The Secretary read the minutes of the third meeting of the House of Delegates.

Dr. V. O. Harvard moved that the minutes be adopted as read.

Seconded by Dr. Lyle and carried.

27. Dr. Cosby Swanson, Atlanta, read a paper on "X-Ray as an Asset to the Dermatologist," which was discussed by Drs. George L. Echols, Milledgeville; E. C. Thrash, Atlanta, and in closing by the essayist.

28. Dr. Frank K. Boland, Atlanta, read a paper on "Mistakes in the Treatment of Acute Appendicitis."

Discussed by Drs. C. W. Roberts, Atlanta; W. A. Mulherin, Augusta; T. C. Davison, Atlanta; A. J. Mooney, Statesboro; M. A. Clark, Macon; Charles H. Richardson, Jr., Macon, and in closing by the essayist.

29. Dr. J. F. Mixson, Valdosta, read a paper entitled "Obstetric Technic in the Average Home."

30. Dr. Marion T. Benson, Atlanta, read a paper on "Obstetrics in Private Practice with Reference to Infection."

31. Dr. L. A. Baker, Tifton, read a paper entitled "Some General Remarks on the Practice of Obstetrics."

These three papers were discussed together by Drs. George L. Echols, Milledgeville; W. A. Mulherin, Augusta; R. F. Peat; William H. Myers, Savannah; C. M. Curtis, Atlanta; Charles H. Richardson, Jr., Macon; John W. Daniel, Savannah; J. R. Burdett, Tennesse, after which the discussion was closed by Drs. Mixson and Baker.

32. Dr. William H. Myers, Savannah, read a paper entitled "The Epidemic of Dengue Fever in Savannah in 1922."

Discussed by Drs. V. H. Bassett, Savannah; Henry T. Compton, Savannah; Stewart R. Roberts, Atlanta; E. T. Coleman, Graymont; Dr. Fort, State Board of Health, and in closing by the essayist.

33. Dr. J. T. Stukes, Americus, read a paper on "New Germicides and Antiseptics Employed in Urethro-Vesical Irrigation."

Discussed by Dr. H. Y. Righton, Savannah, and in closing by the essayist.

34. Dr. Ralston Lattimore, Savannah, read a paper on "Vital Capacity Readings, Their Value in Clinical Medicine."

Discussed by Drs. J. M. Anderson, Columbus; Louis M. Warfield, Ann Arbor, Michigan; Stewart R. Roberts, Atlanta, and in closing by the essayist.

35. Dr. N. L. Spengler, Donaldsonville, read a paper entitled "A Study of the Milk Supply of Georgia."

Discussed by Drs. V. H. Bassett, Savannah; Frank K. Boland, Atlanta, and W. A. Mulherin, Augusta.

At this juncture, Dr. V. O. Harvard called the House of Delegates to order for the transaction of business.

Dr. Harvard stated that the Council had voted to appropriate \$250.00 for Dr. Toepel's committee; \$150.00 for Dr. Campbell's committee, and that Dr. Louis M. Warfield's expenses be paid.

Dr. Frank K. Boland moved that the action of the Council regarding these items be confirmed.

Seconded by Dr. Mulherin and carried.

Dr. Spengler introduced a resolution providing for a simple and efficient way by which the purity and quality of the milk supply of cities of three thousand people or more may regulate their milk supplies.

Dr. Toepel moved that the resolution be adopted. Seconded.

Dr. Mulherin moved to amend that the resolution be referred to a committee appointed by the chair with power to act. Seconded.

The amendment was accepted, and the resolution was so referred.

The President appointed on this committee Drs. Mulherin, Boland and Abercrombie.

On motion, the Association adjourned until 3 P. M.

THIRD DAY—AFTERNOON SESSION

The Association met at 3:15 P. M., and was called to order by the President.

The election of officers was proceeded with.

The President appointed as tellers Drs. Thomas C. Coleman, M. A. Clark, J. W. Palmer, and E. E. Murphey

For President, Dr. John W. Daniel, Savannah, received 87 votes, Dr. Frank K. Boland, 36, and J. W. Hesse, 29. Eighty-seven being a majority of the votes cast, Dr. Boland moved that Dr. Daniel's nomination be made unanimous.

Seconded and carried.

Dr. Daniel was declared duly elected President for the ensuing year.

The following officers were balloted for and declared duly elected: First Vice-President, Dr. A. J. Mooney, Statesboro.

In the case of the Second Vice-President the rules were suspended and Dr. Henry C. Wheelchel's nomination was made unanimous.

Dr. Palmer moved that the Secretary wire Dr. Wheelchel of his election.

Seconded and carried.

Dr. J. W. Palmer, Ailey, was elected delegate to the American Medical Association, and Dr. James N. Brawner, Atlanta, alternate.

Councilors were elected as follows: Ninth District, E. T. Gibbs, Gainesville; Tenth District, S. J. Lewis, Augusta; Eleventh District, J. C. Wilson, Valdosta; Twelfth District, T. C. Thompson, Vidalia.

DR. MULHERIN: A committee was appointed by the House of Delegates to look into a resolution offered by Dr. Spengler, this committee consisting of Drs. Boland, Abercrombie and myself. The Committee recommends that the resolution be referred to the Committee on Public Policy and Legislation.

Seconded by Dr. Toepel and carried.

THE PRESIDENT: I am going to ask Dr. Lattimore and Dr. Coleman to escort the newly elected President to the chair.

Dr. Daniel, in accepting the presidency, said: Gentlemen: I thank you very much indeed for the compliment you have paid me in electing me as your President for the coming year. I want to say at this juncture that Dr. White is really the man who is entitled to this honor. Unfortunately Dr. White, on account of his health, has had to move to another state, and I am going to ask that the Secretary of this Association wire Dr. White our greetings and to wish him health, wealth and prosperity in his new field and regret that he is not here with us to fill this office.

Gentlemen, as your new President, I am going to ask that you all be patient with me, and I am going to ask for your heartfelt sympathy in all my shortcomings and your support in trying to put things over. We are going to try to put into effect a constructive program.

A few days ago, while in Atlanta, I saw a communication that one of Atlanta's physicians had received from a western state, stating that if he came to that state on a certain date and spent a week, during that week he could give lectures and clinics. The idea is to bring a postgraduate course to the men of that state. Now, it strikes me, we have ample facilities in Georgia for doing just as much as any of the western states can do. We have men that are capable of doing anything that any of the western

states can do, so instead of our men going to definite centers and postgraduate schools, where they are mostly money schemes, it seems to me it would be better for them to stay at home. We shall endeavor to establish clinics in five of the big cities of Georgia, not holding them all at one time but say every other month, or whatever we see fit to do and invite men throughout Georgia to hold these clinics on definite days and on definite subjects, inviting the medical men of Georgia free of charge instead of having them go to New York and elsewhere and wasting their time and money. I think that would be a good constructive proposition.

I hope you will help me with the State Board of Health of Georgia; that we should go before the Legislature and get behind the State Board, and let us try to do something for public health. Let us try to build up the tuberculosis sanatorium at Alto and other things the State Board of Health have in mind. Let us be a unit, and let us work for the common good of the people of Georgia from a sanitary and health standpoint.

I am going to ask that the Society send a telegram to Dr. Wheelchel, congratulating him and extending best wishes for a return to good health.

THE PRESIDENT: The next thing in order is the place of meeting.

DR. T. C. COLEMAN: I bring with me an invitation from the Richmond County Medical Society, from the Chamber of Commerce, and from the Mayor of Augusta, all inviting you to hold your next meeting in our city. I could say a great deal about Augusta, but I won't. It is unnecessary. You are familiar with Augusta's hospitality, and while we do not hope to excel what we have had here in Savannah, I am sure, if you will come to our next meeting, we will make you have as good time as you have had here and as profitable a one as well.

DR. J. L. HIERS: I move we accept the invitation to meet in Augusta next year.

Seconded and carried.

DR. E. T. COLEMAN: It has been my pleasure to attend a great many sessions of the Medical Association of Georgia, and

I do not know of any place I have visited where we were not well entertained, and I am positive we have never been better entertained than in the City of Savannah at this time, and I move that a rising vote of thanks be extended to the City of Savannah and to the local profession for their magnificent entertainment.

Seconded and carried.

As there was no further business to come before the meeting, on motion, the Association adjourned to meet in Augusta in 1924.

MEDICAL ASSOCIATION OF GEORGIA. MINUTES OF THE COUNCIL.

The first meeting of the Council was held Tuesday, May 1, 1923, at the DeSoto Hotel and was called to order at 8:30 P. M., by the Chairman, Dr. V. O. Harvard, of Arabi, Ga.

Secretary Bunce read the minutes of the Council meetings for 1922.

THE CHAIRMAN: What will you do with these minutes?

DR. J. O. ELROD: I move that the minutes be adopted as read.

Seconded by Dr. W. A. Mulherin and carried.

THE CHAIRMAN: We will now listen to a report by Dr. M. C. Pruitt.

Dr. Pruitt presented the following report:

For the improvement of the Association and the betterment of the State Journal, I would respectfully submit the following suggestions for the consideration of the Council:

1. That each congressional district be urged to make provision for a five minute paper on the scientific program on the subject "Our State Medical Journal," to be followed by a general discussion.

2. It has been difficult in the past to get the members of the Association to appreciate the State Journal because its value has not been impressed upon them as deeply as it should have been, particularly the value of

the scientific papers read before the State Association with the interesting and instructive discussions thereon.

3. I cannot emphasize too strongly the importance of members throughout the state sending in news items for publication in the State Journal. These items are of great interest to the rank and file of the profession and they are constantly on the lookout for them.

4. The State Journal is an advertising medium of great importance in which all physicians of the state should take an active interest.

5. The Journal is not as widely read by the members of the Association as it should be considering the valuable articles and discussions appearing in it from month to month.

6. When a member of the Association moves from one city to another he should report that change to the Editor of the State Journal in writing, so that the Journal may be forwarded to his right address.

7. Birth, death and for sale notices should be sent to the Editor of the State Journal in suitable form for publication, in order that they may receive due recognition and be given proper publicity. There are only two avenues through which news item information can be obtained; the clipping bureau, to which we are subscribers, and through members of the Association.

8. Referring again to papers read before District Medical Societies, the authors of these papers should prepare them in full or in abstract form for publication in the State Journal. The same applies to reports of interesting cases presented at these meetings. It is well to point out in this connection that before a man can become a member of a District Medical Society he must be a member of a County Medical Society.

Papers read before the State Association are given precedence over all other papers, and those read before District Medical Societies are given next consideration.

9. All papers turned in for publication should be typewritten, double spaced, the date and the place where papers were read,

as well as the names and addresses of the authors. This is absolutely necessary. All cuts or photographs accompanying papers should bear the authors names and legends, in order to make the records as accurate as possible.

10. Lastly, it is hardly necessary to emphasize the great importance of the medical defense feature of our organization which is and has been of great benefit to the members in defending them against suits for malpractice.

Respectfully submitted,

M. C. PRUITT.

THE CHAIRMAN: You have heard this excellent report. I hope it will bring out a free discussion, but first, I will entertain a motion to dispose of the report.

DR. W. C. LYLE: I move the report be received. Seconded by Dr. Elrod.

DR. W. C. LYLE: There are two things that I think probably should come before the Council in connection with the Journal. One of these things I have called attention to on several occasions while editing your Journal, and I want to do so again and lay special stress on it because I realize the importance of it perhaps more than any man who has not had experience with our State Journal. We limit our advertising to articles that are approved by the Council on Pharmacy and Chemistry of the American Medical Association. That makes it a more desirable advertising medium, and we are enabled to charge higher prices than we would if the pages of the Journal were thrown open to every Tom, Dick and Harry who wanted to advertise any sort of thing. We have to limit the advertising, and as a result of limiting it we can cut down the number of advertisements we can receive, and our Journal under ordinary conditions would receive \$10,000.00 a year in advertising if we did not limit it, as has been outlined.

Wherein may we assist the detail man who comes into our office? I make it a rule invariably that when a man comes into my office and leaves samples of medicine to ask him the question, has your preparation been approved by the Council on Pharmacy and

Chemistry of the American Medical Association? Well, he begins to make excuses and it puts him on the defense immediately. I say to him, I am having men in Chicago to determine for me whether or not your preparation is meritorious. Yours may be all right; you say you have not submitted it to the Council on Pharmacy and Chemistry. I will not question the fact that your preparation may be perfectly all right, but I do not know that it is, and I know a great many of them are not. Therefore, as a rule, when a man leaves samples of preparations I do not accept them unless they are approved by the Council on Pharmacy and Chemistry. When I say these things to the detail man, he says, "You are the first man in the city who has said anything like that to me." They may not feel the necessity of submitting their preparations to the Council on Pharmacy and Chemistry even though they may be meritorious. We, as members of the Association and Councilors who conduct the Journal, should refuse to accept samples of preparations that have not been submitted to and approved by the Council on Pharmacy and Chemistry of the American Medical Association. If that were done, these detail men would jump on their manufacturers who would then submit their preparations to the Council on Pharmacy and Chemistry, and as a result of it we would get advertising for the Journal. That is what I would ask you to do. We are not doing justice to the members of the Association and to ourselves, and by no means are we doing justice to the Journal of the Association, when we allow every Tom, Dick and Harry, because they are smooth talkers and nice appearing chaps, to leave samples of their preparations with us with the hope of having them used. We will doubtless throw many of them in the waste-basket as soon as the detail man gets out of the office. I would insist on making it known to all manufacturing houses that we do not want them to send us preparations unless they have been approved by the Council on Pharmacy and Chemistry, and I do this in the interests of the Association and of the Journal.

One other point that was not brought out I should like to mention. The Journal is conducted by the Council of the Association. A committee was appointed by the Council of the Association for the purpose of conducting the Journal, and at that time Dr. McCurry was a member of the Council. He was appointed on this committee. Dr. McCurry is not a member of the Council at the present time, and we as a Council have to conduct the Journal. So the question has been raised whether or not Dr. McCurry should be on the so-called managerial staff of the Journal, in that he is not at this time a Councilor of the Association. I simply bring that to your attention and to the attention of your editor.

THE CHAIRMAN: Is there any further discussion?

DR. W. A. MULHERIN: I think the suggestions of Dr. Pruitt should receive more consideration, and there is one thought I would like to bring out. If I understood Dr. Pruitt rightly, he mentioned that each one of the councilors should take five minutes in speaking of the value of the Journal.

DR. PRUITT: I stated that each congressional district be urged to make provision for a five minute paper on the scientific program as a part of the district meeting on the subject "Our State Medical Journal." The man to contribute that five minute paper may be a Councilor or any other member of that district.

DR. MULHERIN: That is a good suggestion. I thought you meant it was to be presented before the state meeting.

DR. PRUITT: No. I had reference to the district meetings.

DR. MULHERIN I would like for these suggestions to be read one by one. Dr. Bunce knows what is best for the Journal, and let us take action upon them. I move that the suggestions be read by number and action taken thereon. (Not seconded.)

DR. C. K. SHARP: I question whether the Medical Association of Georgia has authority over district societies.

THE CHAIRMAN: The point is well taken because in organizing we have always held that men were not eligible who were not members of their county societies.

DR. SHARP: There seems to be a disposition on the part of some of the secretaries to resent any suggestions from the Medical Association of Georgia. At any rate, there is a tendency, and that is the reason I have raised the question.

DR. LYLE: I may say in that connection that under the old Constitution and By-Laws it was not contemplated that we should have any district societies. It was planned, however, that the district society was a very important cog in the wheel of the state organization. A resolution was at some time introduced which is not incorporated in the Constitution and By-Laws, so far as I can recall, to the effect that no man was eligible for membership in a district society unless he belonged to his county society, and at that time, a sort of model constitution and by-laws for district societies was recommended, based upon the Constitution and By-Laws of the First District Medical Society. While I am a little hazy about it, I think it was not embodied in the Constitution and By-Laws. In the proposed revision of the Constitution and By-Laws, the committee for which was appointed last year, and I was a member of it, provision is made for district societies.

DR. A. H. BUNCE: That is covered in Chapter III, section 8, of the By-Laws, which reads: "It shall divide the state into councilor districts, one for each congressional district, and when the best interests of the Association and profession will be promoted, there shall be organized in each district a medical society, and all members of component county societies and no others shall be members of such district societies."

THE CHAIRMAN: Dr. Lyle is correct in his statement.

Motion to adopt the report of Dr. Pruitt was then put to a vote and carried.

THE CHAIRMAN: We will now listen to reports of Councilors from the various districts. I will ask Dr. Charles Usher, Savannah, to report for the First District.

FIRST DISTRICT.

Counties	Members		
	1921	1922	1923
Bryan			
Bulloch	9	15	17
Burke	12	14	5
Candler (Bulloch)			
Chatham	45	54	63
Effingham			
Evans (Tatnall-Evans)			
Jenkins	5	3	4
Liberty			
McIntosh			
Screven	8	10	6
Tatnall-Evans	10	9	11
Lang			
Total	89	105	106

There are not many men in Bryan County. We have Dr. Smith and Dr. Strickland, and they belong in Savannah. Bulloch and Can-

dler Counties go together. We had a district meeting there the 17th of March, at which there were 135 in attendance. Burke County is not so well organized, having only five men this year. Chatham County is a little better this year than it was last, having 63 members. Effingham County has five or six doctors and they belong here. Evans County goes with Tatnall and they have a pretty good medical society, 11 members this year. Jenkins County has very few doctors, there being three last year and this year four. In Liberty County there are two doctors, and we have not been able to get them to join. McIntosh and Lang Counties have very few doctors. Screven County is not as well organized as it was last year, having only six members. In this district there are 200 doctors, and when we have a meeting we send an invitation to all of them. It is pretty hard to say who belongs to it and who does not. We keep no regular record.

(To be continued)

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No. 7

SOME UNREPORTED METHODS AND EXPERIENCES*

Pneumonia in Children

E. C. Thrash, M. D.

Atlanta, Ga.

Research work should not be confined to laboratories. Much of our clinical knowledge in the past has been obtained through accident. The accidental discovery of Jenner pales into insignificance when compared to the scientifically planned researches of Virchow, Koch, Flexner, Erlich, Bordet, yet every layman knows Jenner and few have even heard of the others. All cannot be Virchows, Kochs, Flexners—but everyone in his chosen field of endeavor should make that field more productive for his having worked; then scientific knowledge will go forward and humanity will be better served.

The few following methods and observations have proven of value in the hands of the writer, and they are being submitted for what they are worth.

Dealing with pneumonias in my President's address of a year ago, I stated that serum was the only remedy which we possessed that even approaches a specific, and properly administered would save many sufferers who would otherwise die. The ease with which immunity can be established either by the administration of active or passive immunizing agents is inversely proportional to the age of the sufferer. I arrived at this conclusion after a careful study of the subject for twenty-five years. Therefore, in our efforts toward immunization, the younger the person toward which we direct our activities the more gratifying will be our results. In utero, cell differentiation takes place to carry on unmolested physiological processes, as soon as the child is born

external forces begin to molest these processes. A further differentiation must be continued to protect the economy from these external molestations. Pursuant to this, cells differentiate so that the child can be protected against mumps, measles, whooping cough, diphtheria, scarlet fever—in fact every external force which will act deleteriously upon normal functions. This differentiation taking place in the cells and their metabolic products we call immunity, and this process we can best aid while it is at the peak of its activity which is in youth. In substantiation of this the writer has not administered pneumococcic serum to any child that did not get well. There are but few instances where one person's experiences establish truth. Individual experiences should only be made a basis upon which such establishment is made by further investigation. I have not had the opportunity to treat a great many cases of pneumonia in children in this way, but with the few results have been gratifying.

One recoils at the thought of giving intravenous treatment to small children because it is accomplished with the very greatest difficulty, much pain and torture, and often there is complete failure. The writer, after getting the latter results on several occasions, began groping around for a substitute. The fontanelle was found satisfactory in children under ten or twelve months old, but this class is limited. Subcutaneous injections are not satisfactory because the quantity of serum needed produces too much pain and disturbance of the tissues, and is too slow in its absorption. The peritoneum is the wall of a large lymph space. The immunization of rabbits against human blood through this space caused the writer to feel that it would be ideal to use this route in the injection of large quantities of serum

*Read before the Medical Association of Georgia, Savannah, Ga., May 2, 3, 4, 1923.

in an effort to immunize children. This was tried and found to be satisfactory. The serum is taken up by the peritoneum with sufficient rapidity. The technique is simple and can be carried out by the veriest tyro in no longer time than is required to give a hypodermic injection, and is even less painful. Serum being taken up more slowly in this way than when injected into the veins makes anaphylaxis less liable to occur. I have suggested this method to a number of others who have used it and they have been imminently pleased.

In view of the fact that most pneumonias in children are due to a mixed infection of inspiratory origin, I invariably use the polyvalent strepto-pneumococcic serum. There are few cases of pneumonia in children where streptococcus is not playing an important role in the inflammatory process, and that is why I always use the combined polyvalent serum. If the pediatricists will bear in mind this method of technique and administer strepto-pneumococcic serum early in pneumoniae of childhood they will be happy over the outcome and many lives of children will be saved.

II

Hypertension

Hypertension is a symptom and not a disease. There is no such thing as hypertension to the person whose blood is being pumped. That is, every person whose tension is just right to supply the proper quantity of blood for the work that that blood is due to do in carrying on metabolic activity and physiological processes, has a pressure normal to his present status though it may be over two hundred. If the tension is insufficient for this it is too low though it may be two hundred and fifty. Nature intends to produce just the degree of pressure upon the blood to enable that blood to render the acme of service, it is only when the heart and vascular system exhaust themselves in an effort to render this service that suffering begins.

There are two dominant causes for high blood pressure; one a thickening of the walls of the vascular system and narrowing of the lumen, the other an inferior quality of the blood content. The blood carries food

to the respective cells. If this food is poorly prepared then the cells suffer from indigestion. Probably the most common cause of this impairment is the excessive intake of proteins easy of putrification. These proteins must be delicately prepared in the stomach and circulation blood before the cells will accept them. If they reach the cells before this end result is obtained these cells sicken and become rebellious and in a reflex way the arterioles contract and refuse to allow the full quota of such food to pass. The tension naturally becomes higher on account of contraction of the systemic arterioles. The system refusing to accept such unprepared food the kidneys are waterlogged with vicious material, are irritated and ultimately nephritis results.

It is not my purpose to give a lengthy dissertation upon hypertension but simply to summarize so there may be a better grasp of my meaning.

When I refer to treatment of hypertension it goes without saying that dieting is a sine qua non in either of the two mentioned causes, but the purpose of this report is to refer to fractional bleeding. This has produced good results in my work, and I shall give the method of this procedure. What I mean by fractional bleeding is withdrawing from 50 to 100 c.c. of blood two or three times a week. The chief benefit in this bleeding in my opinion is not relieving the high tension which itself is valuable, but it stimulates the haemopoietic system to render better service. We often speak of injecting new blood into business enterprises to improve them. In this instance we stimulate the building up of better blood. The old, enfeebled, intoxicated blood content is the chief offending factor in hypertension. Removing this encourages the building up of new blood with red cells of a better oxygen and CO₂ carrying power, white cells with better fighting power, and plasma with a better immunizing content so that it can carry on a more perfect terminal digestion of foods taken in by the radicals of the portal veins and lacteals. Such improved food is then acceptable to the tissue cells. These cells signal for this good food, the arterioles

respond to the signal, open up and allow the blood to flow, relieving tension. Metabolism improves, the vicious circle is broken, and the aggregation of cells, which is the patient himself, takes on new life.

I have been practicing this method upon suitable cases for the past four years and results have been gratifying. This procedure will do practically nothing for far advanced cases of nephritis where the myocardium and vascular system have broken down, and irreparable injuries have taken place. One need not expect benefits except in those cases where little damage has been done. The bleeding should be continued over a period of several weeks after which it may be discontinued. The patient, if he will take the proper care of himself, and govern his eating properly may live for an indefinite period without further disturbance. Should such disturbance arise, however, the same process of bleeding can be re-instituted. In recent hypertension where serious injury has not already been done to the cardio-vascular system my opinion is that a complete cure can be made. This is true, too, in mild cases of nephritis. Improvement only can be expected in a sufferer from advanced nephritis who has a good heart, and not a cure.

RECURRENCE OF THE PROSTATE*

By

W. L. Champion, M.D., F. A. C. S. and
A. F. Caldwell, M. D., Atlanta,
Georgia.

This subject and the report of a case of the second removal of the prostate is presented on account of its rarity in our operative experience, and the fact that no reference is made in textbooks to recurrence of the prostate.

Having read with much interest the valuable paper of Dr. W. A. Bryan, of Nashville, Tennessee, in the January issue of "Surgery, Gynecology and Obstetrics," on the "Recurrence of the Benign Prostate," it recalled to our minds a case of hypertrophy of the prostate in a patient fifty-seven years of age, in

which we removed the gland by the suprapubic route in August 1911. The patient made an uneventful recovery, and had no difficulty in emptying the bladder until July, 1919, which was eight years later, when he came to the office unable to void. The finger in the rectum disclosed the fact that he had a hypertrophied prostate. On account of its recurrence we were inclined to believe it malignant. On the following day a cystotomy was done. A week later we enucleated a glandular mass larger than the one removed eight years before. Contrary to our expectations, microscopic section demonstrated the growth to be benign.

At the first operation we felt certain all the gland had been removed, or a complete prostatectomy accomplished, if such is possible. At the second operation, the thought naturally occurred that previously some portion of the gland might have been overlooked, and we were very careful not to leave any nodule or portion of the gland that might necessitate subsequent removal.

During April of this year, which is three years and eight months since the second operation, the patient came into the office and stated that he was voiding too often during the day, and was up several times at night. A finger in the rectum came in contact with a mass as large as either of those previously removed. The present outlook fore-shadows the third removal of a prostate.

Dr. Bryan in his article states that, "while it may be agreed that it is culpable to leave gross portions of a prostate, it must be admitted that there is weighty evidence that 'complete' prostatectomies are not complete, and that there is unequivocal proof that benign recurrences have followed prostatectomy at the hands of very able men."

In an abstract of an article from the "Journal of Urology," Leipzig, by Honnegger, he states, "that a number of small nodules have developed in the bed after enucleation of the prostate." "They had evidently developed from the capsule left by the operation. The microscope showed that this capsule consisted of prostatic tissue pressed peripherally flat.

*Read before the Medical Association of Georgia, Savannah, Ga., May 2, 3, 4, 1923.

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OF THE

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Devoted to the Welfare of the Medical Profession of Georgia.

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JULY, 1923.

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

THE PERIODIC MEDICAL EXAMINATION OF APPARENTLY HEALTHY INDIVIDUALS.

With the slogan "Have a Health Examination on your Birthday," the National Health Council, composed of the leading national voluntary and official health and medical organizations of the country, is sponsoring a country-wide campaign for periodic health examinations beginning on July 4th, 1923 (the Nation's Birthday) and extending until July 4th, 1924. The movement has been endorsed by the American Medical Association in accordance with the following resolution, which was adopted at the St Louis meeting of the Association last year:

"Whereas, The need and value of periodic medical examination of persons supposedly in health are increasingly appreciated by the public, it is recommended by the Council on Health and Public Instruction that the House of Delegates authorize the Council to prepare suitable forms for such examinations and to publish them in The Journal of the American Medical Association; and that the county medical societies

be encouraged to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations."

Dr. R. L. Wilbur, President of the American Medical Association, referred to the necessity for periodic physical examinations of all people in his presidential address at San Francisco this year.

A committee of the American Medical Association has prepared excellent forms which can be obtained at cost price from the Association headquarters, 535 N. Dearborn Street, Chicago, Ill. A reprint by Haven Emerson, M.D., on the same subject, outlining suggestions for such examinations, is also available at the American Medical Association headquarters.

The National Health Council, directly or through the co-operation of other agencies, has prepared a pamphlet for distribution to the public, two excellent posters, a set of thirty lantern slides with lecture outline included, and a moving picture film. With the exception of the latter, which is available for free distribution, all of the other material is sold at cost price.

The members of the National Health Council include the following organizations:
American Association of Industrial Physicians & Surgeons

American Child Health Association

American Public Health Association

American Red Cross

American Social Hygiene Association

American Society for the Control of Cancer

Conference of State and Provincial Health Authorities of North America

Council on Health & Public Instruction of the American Medical Association

National Committee for Mental Hygiene

National Committee for the Prevention of Blindness

National Organization for Public Health Nursing

National Tuberculosis Association

United States Public Health Service

Women's Foundation for Health.

THE LYNCHING RECORD FOR THE FIRST SIX MONTHS, 1923.

July 1, 1923.

Dear Sir:

I send you the following information concerning lynchings for the first six months of this year. I find according to the records compiled by Tuskegee Institute in the Department of Records and Research, Monroe N. Work in charge, that in the first six months of 1923 there were 15 lynchings. This is 15 less than the number 30 for the first six months of 1922 and 21 less than the number 36 for the first six months of 1921.

Of those lynched, two were whites and thirteen were negroes. One of the latter was a woman. One of those put to death was charged with the crime of rape. The other offenses charged were: murder, 2; killing officer of the law, 2; wounding officer of the law, 2; no charge reported, 2; assisting man charged with rape to escape, 1; trying to pass for white, 1; resisting posse searching for man charged with rape, 1; participating in depredations connected with railroad strike, 1; cattle stealing, 1; trying to act like white man and not knowing his place, 1.

The states in which lynchings occurred and the number in each state are as follows: Arkansas, 1; Florida, 7; Georgia, 2; Louisiana, 1; Mississippi, 2; Missouri, 1; and Texas, 1.

Yours very truly,
R. R. MOTON,
Principal.

(Continued from Page 265)

This explains recurrence after prostatectomy, even after removal of the prostatic portion of the urethra and encircling glands."

In noting the fibrous changes in the prostate, Keyes, in his Urology states, "Exceptionally the fibrosis so predominates that enucleation is impossible, the diseased portions of the gland being so welded to the periphery by scar tissue that the whole organ forms one sclerotic mass." "It is to be further noted therefore, that enucleation of the enlarged prostate leaves behind the peripheral portions of the gland."

Bearing in mind the fact that removal of the offending gland has in no wise removed the causative factor in the initial hypertrophy, together with the statements that prostatectomies are not "complete," and that nodules have developed from the capsule; one might ask, "Why do we not have more recurrent prostates?" Prostates have in most instances lived their allotted span by the time they come for relief by operative procedures, and the average length of life after a prostatectomy is only a few years. This fact may, in a measure, explain why we do not see more recurrent prostates. On the other hand, it is not unusual to see patients live ten or fifteen years after a prostatectomy and have no obstruction of the urinary flow.
313-314-315 Grant Building.

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NEWS ITEMS AND PERSONALS

Dr. D. T. Rankin, for many years one of the leading physicians and psychiatrists of the Georgia State Sanitarium, has resigned from the staff of the hospital to become a member of the staff of the Allentown State Hospital for the Insane, Allentown, Pa.

Dr. E. L. Connally, of Atlanta, is the oldest living graduate of the Medical Department of Emory University, his class being that of 1859. In company with Mr. William Jefferson McDaniel, of Dalton, Ga., oldest graduate of the University, class 1856, they sat together at the alumni luncheon on Alumni Day.

Dr. Harry B. Nunnally, of Monroe, is in New York studying diseases of the ear, nose and throat. After November, Dr. Nunnally will be associated with Dr. G. D. Ayer, in the Hurt Building, Atlanta, Georgia.

Dr. W. H. Lott has moved from Jersey, Ga., to Buford, Ga., where he will make his future home.

Dr. H. W. Clements has returned to Adel, Ga., from Chicago, where he has been for several months taking a post-graduate course in surgery.

Dr. Lauren H. Goldsmith announces the opening of offices at 746 Peachtree Street, Atlanta, and will limit his practice to Pediatrics.

Dr. James K. Fancher announces the opening of offices in the Fatiron Building, Atlanta, for the practice of internal medicine.

Dr. Bradley B. Davis has opened offices in the Bailey Building, Gainesville, Ga., and limits his practice to the diseases of children.

Dr. Harry R. Slack, Jr., of LaGrange, Ga., who has spent the past year in Peking Union Medical College, as exchange professor and head of the Department of Otolaryngology, accompanied by his wife and two sisters, Mrs. Ruth Slack Smith and Miss Louise Slack, sailed from Shanghai June 20th. They return via Suez Canal and will spend some time in the Holy Land and Europe. Dr. Slack expects to attend Clinics in Vienna and Paris and will reach home about the first of October.

Dr. Bowman C. Crowell, of Charleston, South Carolina, has been elected as Professor of Pathology in the Jefferson Medical College to succeed to the position formerly occupied by Dr. William M. L. Coplin, at one time director of Public Health and Charities of the city of Philadelphia, and who resigned his college position one year ago.

The LaGrange Medical Society met in their library at Dunson Hospital June 21st and elected the following officers: President, Dr. Emory R. Park; Vice President, Dr. R. S. O'Neal; Secy-Treasurer, Dr. E. C. Herman. Dr. Slack, the retiring president, reported the society now owns a nice medical library and is out of debt.

The Third District Medical Association held its thirty-second semi-annual session at Montezuma, Ga., on Wednesday June 20th, 1923.

The Antithesis of Urogenital Tuberculosis in a Tabetic Patient

Victor F. Marshall and Guy W. Carlson, Appleton, Wis. (Journal A. M. A., June 23, 1923), report a case of tuberculosis of the bladder in a patient affected with tabes. A search through the files of the Surgeon General's Index Catalogue failed, they say, to disclose a report of a similar case.

Proceedings of the 74th Annual Meeting of The Medical Association of Georgia, Savannah, Ga., May 2, 3, 4, 1923

(Continued from June Issue)

We collect dues twice a year, and in that way the members keep paid up.

There is a lot of work of a missionary nature to be done in the First District. There are many physicians in Savannah who have not been able to get in. Our dues here are a little high; they are \$25.00 a year. That keeps some of them out, and out through the district I cannot see why they cannot come in. I believe that is all I have to report.

THE CHAIRMAN: How many counties have you organized and how many are unorganized?

DR. USHER: Liberty and Bryan have no societies. They belong here. Effingham has no medical society. The members in that county belong here. McIntosh and Lang have no societies. We have no society in Bryan County. They are organized but not as separate societies.

REPORT OF COUNCILOR OF SECOND DISTRICT.

Dr. C. K. Sharp, Arlington.

SECOND DISTRICT

Counties	Members		
	1921	1922	1923
Baker			
Tri			
(Calhoun-Early-Miller)	22	25	24
Colquitt	10	11	1
Decatur-Seminole	16	11	12
Dougherty	14	13	17
Early (Tri)			
Grady	10	8	7
Miller (Tri)			
Mitchell	18	12	11
Tift	13	10	7
Worth	12	6	7
Thomas	27	28	28
Total	142	124	114

Baker County has three physicians, one a member of the Tri-Medical Society. It is the only white county on the map as you see. The Tri-County Medical Society, composed of Calhoun, Early and Miller, is a 100 per cent. county. Every eligible doctor in it is a member. Last year we had 25 members, this year 24, having lost one by death. Colquitt County has lost one man this year while Decatur-Seminole has one more, being 11 last year and 12 this year. In Dougherty County every man in it is a member, making 17. Early County had 8 members last year and 7 this year. Mitchell County had 12 last year, and 11 this year, having lost one man who, I think, moved to Florida. It is a 100 per cent. county. Tift has 7 members this year as against 10 last year. Worth County has 7 members this year as against 6 last year. Thomas County has 28 members, a 100 per cent. county.

One great trouble we councilors have is lack of cooperation of the secretaries in answering our inquiries. They do not answer our communications or inquiries promptly and do not cooperate with us as they should. If they did so, much better work would be accomplished, and as councilors we should urge upon them the importance of cooperating with the Council.

REPORT OF THE COUNCILOR OF THE THIRD DISTRICT.

Dr. V. O. Harvard, Arabi.

THIRD DISTRICT.

Counties	Members		
	1921	1922	1923
Ben Hill	12	11	12
Clay			
Crisp	21	19	19
Dooley	6	6	
Lee			
Macon-Taylor	10	13	11
Quitman			

	1921	1922	1923
Randolph	16	14	15
Schley			
Stewart-Webster	10	11	10
Sumter	26	16	22
Taylor			
(Macon-Taylor)			
Terrell	9	8	10
Turner	12	12	10
Webster			
(Stewart-Webster)			
Total	122	110	109

Quitman County has one doctor and he belongs to the Randolph County Medical Society. Randolph County has 15 members as against 14 last year. Terrell County has 10 men this year as against 8 last year. Stewart-Webster has 10 this year as against 11 last year. Sumter County has 22 members this year as against 16 last year. Macon-Taylor has 11 this year as against 13 last year. Turner County has 11 this year as against 12 last year. Lee County has 6 men, with no organization. One man belongs to the Sumter County Society. The other 5 men will not listen to anything. They will not answer a letter or attend a society meeting. We have a live district society. We meet twice a year, in June and November. We have a good attendance at each meeting, excellent programs and good suggestions. We shall embody the suggestions offered by Dr. Pruitt in our program at the next meeting and help out the State Journal all we can.

REPORT OF THE COUNCILOR OF THE
FOURTH DISTRICT.

Dr. W. R. McCall, LaGrange.

FOURTH DISTRICT.

Counties	Members		
	1921	1922	1923
Carroll	24	11	21
Chattahoochee			
Coweta	12	8	1
Harris			2
Heard	11	5	1
Marion			
Meriwether	9	7	
Muscogee	34	43	21
Talbot	6	1	4
Troup	23	27	29
Total	119	102	60

I have written certain county societies in my district three times and have been unable to get answers to my communications. I received a letter from one of the county societies stating that the state dues were entirely too high, and that the members would not be a party to any such graft. I made a visit to that society and wrote them that when they had a meeting in February I wanted to talk to them. They sent me a notice of the meeting; I went up there and only two men appeared. I talked to them about sending in their dues. I likewise went around and talked to a number of other doctors individually who did not express themselves very freely. However, all of them agreed that the Journal was worth \$3.00, and that the \$2.00 for medical defense was the cheapest insurance they could get. When they held a meeting in March I notified them again. I went up there and there were four men present. One has joined the State Association. Harris County has three doctors, with 2 members. One doctor said he was going to join the Muscogee County Medical Society because it was much more convenient. Heard County had 11 members in 1921; 3 have died, and 3 have moved away, leaving only 5. All except the secretary paid dues this year. Marion County has no organization, and there are only 2 doctors in the county. Meriwether had 7 members in 1922. Muscogee reported 21 members in 1923. Talbot County reported 4 members this year. According to Dr. Pruitt, Troup County has 29 members. We have every eligible member in the county except 2. One of them is an old gentleman who does not do much work but is ethical; another one does not do much work and never belonged to any society in his life.

REPORT OF COUNCILOR OF THE FIFTH
DISTRICT

Dr. W. C. Lyle, Atlanta.

This district, consisting of only 5 counties, is for the first time in its history completely organized. Rockdale County not having a sufficient number of doctors to maintain a

separate society, has always been a part of Fulton County Society. I am advised there are not more than three eligible physicians in the county.

DeKalb surrendered her charter some years ago in order to affiliate with Fulton. I have been informed that a number of DeKalb physicians desire to reorganize their county society and secure a new charter, but nothing has been brought to my attention officially. With certain regulations applying to men living in DeKalb and having offices in Fulton and wishing to continue their membership in the Fulton County Society, I am inclined to think it would be advisable.

It was with extreme pleasure that I was able to organize Douglas County, securing every eligible man but one in the county. For years this has been the only unorganized county in the district. All the members are interested and good work is done.

Campbell County maintains a full membership society.

Fulton County Society has recently purchased and equipped a splendid home at a cost of approximately \$30,000, and raised the dues to \$25.00 per year. Notwithstanding this it has not reduced the membership as over 380 men have paid their dues.

Since this report was written representatives from DeKalb County came to see me relative to an organization. The situation there is this: there are more than 20 doctors residing in DeKalb County who have their offices in Atlanta in Fulton County and are affiliated with the Fulton County Society. In fact, I think only about nine men have joined the organization in DeKalb County, and recalling that the county society has jurisdiction over all men residing in that county, it put a rather awkward position up to us because quite a number of the most prominent men in the Fulton County Medical Society are residents of DeKalb County. Dr. Ansley, who was selected as President of the DeKalb County Society, said they would be willing to waive jurisdiction of all men residing in DeKalb and maintaining offices in Fulton County that is, practicing in Fulton County but residing

in DeKalb. The City of Atlanta is in two counties, with a portion of it in DeKalb County. I suggested to Dr. Ansley and the secretary that they give me a written waiver of jurisdiction of men residing in DeKalb and maintaining offices in Fulton County, and under these conditions I would ask the Council to restore their charter which they surrendered some years ago. I have this written waiver, not that a verbal one would be sufficient. But it would not apply any longer and conditions might occur in consequence of it that it would be somewhat embarrassing to some of the men who have contributed largely to the Fulton County Home. That has been done, and after I finish my report I will ask that the Council authorize the issuance of a charter restoring to DeKalb County its charter in order to enable them to have a separate organization.

This will be of considerable advantage under the conditions I have outlined, because there are several small villages in DeKalb and perhaps other than the twenty odd men residing in DeKalb who are members of the Fulton County Society, and one or two of them desire to affiliate with DeKalb County. There are a sufficient number of men in the county to organize a society of twenty members. These men would not care for several reasons to affiliate with the Fulton County Society.

Rockdale County I have referred to with certainly not more than three eligible men in the adjoining county, and we might induce those three to belong to the DeKalb County Society.

I will ask the Council to authorize the issuance of a charter to DeKalb County to enable them to have a separate organization.

This is my report. I could not report 100 per cent. county in Fulton, nor will any one be able to do it, but the membership is larger than it has been notwithstanding the increase in dues.

THE CHAIRMAN: You have heard the report of Dr. Lyle and the recommendation he makes. What is your pleasure?

DR. J. O. ELROD: I move the recommendation be adopted.

Seconded and carried.

REPORT OF COUNCILOR FOR THE SIXTH DISTRICT.

Dr. J. O. Elrod, Forsyth.

SIXTH DISTRICT.

Counties	Members.		
	1921	1922	1923
Bibb	79	84	79
Butts	7	6	7
Clayton			
(Clayton-Fayette)		7	7
Crawford (Bibb)			
Fayette			
(Clayton-Fayette)			
Henry	10	5	5
Jasper	8	5	6
Jones	4	5	3
Lamar	8	8	8
Monroe	9	7	7
Spalding	17	16	15
Pike	7	9	9
Upson	7	9	8
Total	156	161	154

Bibb County is 100 per cent. There are only 5 men who have not paid their dues so far. Butts County had 6 members last year and 7 this year. Clayton-Fayette is just a division of Fayette County and Clayton County. There are not enough doctors in either county to organize a separate society. There are 7 members in 1923. There are 10 men in the county, but it is impossible to get the other 3 men in. Crawford County has 2 men and they belong to Bibb County. Henry County had 5 members last year and 5 this year. Jasper County had 5 members last year and 6 this year. The secretaries try to answer the letters of the councilors when they write to them. Jones County has only 3 members this year as against five last year. One has moved away, and one of the others has failed to pay dues. There are 8 men in Lamar County since organization. Monroe County had 7 members last year and has 7 this year. Spalding County had 16 members last year and 15 this year. I cannot account for the discrepancy. Pike County had 9 members last year and has

9 this year. Upson County had 9 members last year and 8 this year. We failed to collect dues from one man. There are 154 doctors in the Sixth District and of this number 117 are eligible to membership.

REPORT OF THE VICE-COUNCILOR OF THE SEVENTH DISTRICT.

Dr. J. H. Hammond, Lafayette.

I had not thought it would become my duty to make a report for the Seventh District. I had supposed that Dr. McCord, the Councilor, would be here until tonight. It is impossible for me to give you any sort of accurate report. It so happens that I can tell you something about three counties in my district, but I cannot give you any information about the other counties. Dade County is very small and has only 2 doctors, and part of the time they were members of the county society. They are not members now. Catoosa is a contiguous county to my own county. It has four doctors, one of whom is a member of the county society and has been for a number of years. One is a member of the Whitfield County Society, and the other is not a member of any society. I visited Whitfield County some time ago during which time I saw the President, Secretary, and most of the doctors of that county and they told me they were pretty well organized. Whitefield was not very well organized heretofore, but at this time it is. There are two doctors not members of the county society. A district meeting was held not long ago, but the schedule was such that I arrived there after the society had assembled, so that I did not get an opportunity to talk to Dr. McCord. The district is a good one and satisfactory. The society meets twice a year. A little previous to that I had a talk with Dr. McCord and he said he was pleased with the conditions in the other counties, particularly the ones I have spoken of.

I am sorry I cannot give you a more satisfactory report.

REPORT OF VICE-COUNCILOR OF THE NINTH DISTRICT.

Dr. E. T. Gibbs, Gainesville.

NINTH DISTRICT.

Counties	Members		
	1921	1922	1923
Banks	5	4	2
Barrow	6	3	
Blue Ridge	9	6	5
Cherokee	10	10	10
Dawson			
Fannin			
Forsyth			
Gilmer			
Habersham	6	10	8
Hall	12	14	23
Jackson	16	16	14
Lumpkin			1
Milton			
Pickens	2	1	1
Rabun			
Stephens	10	11	
Towns			
Union			
White	1	1	1
Gwinnett	3	9	5
Total	80	85	71

We must get in personal touch with the members in order to get any results. Men do not take an interest in society work unless you see them personally, and so it is a kind of house to house affair. On the 24th of April only 34 men in my district had paid dues. I have had letters from these men and I wrote 65 urgent personal letters to them and up to this time we have 74 members as against 85 last year. Stephens County had 11 members last year and 10 members the year before. We got no report from Barrow County in 1923, and no report from Jackson County in 1923.

REPORT OF COUNCILOR OF THE TENTH DISTRICT

Dr. W. A. Mulherin, Augusta.

TENTH DISTRICT

Counties	Members		
	1921	1922	1923
Baldwin	15	21	15
Glascok			
Columbia			

	1921	1922	1923
Hancock			
Jefferson			
Lincoln			
McDuffie	5	3	4
Richmond	56	46	69
Taliaferro		4	5
Warren	6	6	6
Washington	25	22	20
Wilkerson			
Total	107	102	119

We have held two meetings of the Tenth District Society, and the spirit of organization is developing there.

REPORT OF THE COUNCILOR OF THE TWELFTH DISTRICT.

Dr. T. C. Thompson, Vidalia.

The Twelfth District is better organized than it has ever been. We have more members. We have a live district medical society. We meet twice a year, and we generally have from 50 to 60 members in attendance.

There were no reports from Councilors of the Eighth District and Eleventh District.

THE CHAIRMAN: I will appoint Drs. Thompson and Mulherin on the Publication Committee, and Dr. Charles Usher to take the place of Dr. McCurry.

The Secretary presented his financial report.

(See pages 300 to 302, this Journal.)

THE CHAIRMAN: I will appoint as Auditing Committee Dr. Thompson, Chairman, and Drs. Sharp and Mulherin as the other members of the Committee.

DR. W. C. LYLE: Coming down last night on the train with our Secretary he took occasion to say something about the funds of the Association, and I would like to introduce a resolution at this time that the Council authorize the setting aside of \$1,000.00 this year as a sinking fund, to be invested in bonds or other securities, to be made available, if occasion requires, for use by the Committee on Medical Defense.

I hope there will be no occasion for having to use it. Most state organizations have a sinking fund connected with the insurance feature such as we are carrying. I feel it is

necessary that we have it, and if we can set aside a thousand dollars this year and a thousand next, and for several years, it will make us feel safer and it would give the members of the Committee on Medical Defense a great deal of satisfaction to know that they have some money if occasion requires. If I can get a second to that resolution, I would like to propose it.

Seconded by Dr. Elrod.

DR. MULHERIN: Do I understand that in the event there is found a surplus fund each year we are to set aside a thousand dollars.

DR. LYLE: It is just for this year. Another resolution would take care of it next year.

DR. ELROD: I would like to ask, after we get through with this year's work, whether we will have a thousand dollars available so that it will not hamper us otherwise.

DR. BUNCE: I think a modification might work very well in this way, namely, provided that at the end of the year a thousand dollars or such portion thereof be made available as determined by the new President, Chairman of the Council, and Secretary-Treasurer. I think we will have enough funds to do that and leave a balance. I offer this as an amendment.

The amendment was second by Dr. Mulherin, accepted by Dr. Lyle, and the motion as amended was put to a vote and carried.

DR. MULHERIN: I desire to call the attention of the Council to the fact that the Constitution and By-Laws do not provide for looking after the expenses of our delegates to the Medical Association of South Carolina. I think two of our delegates went over there this year, and if a motion is in order, I would like to move that their expenses to that meeting be defrayed.

Seconded by Dr. Gibbs.

DR. BUNCE: We have a bill from one of the members of the committee for his traveling expenses in attending committee meetings. We have not received bills from members of any other committees for their traveling expenses. The question comes up, which of these bills should be paid and which should not be paid, or should any of

them be paid. We are not authorized to pay anybody's expenses for attending committee meetings. There is no provision in our Constitution and by-laws for that. A member of a committee sends in a bill. Another man who attended a great many committee meetings makes the statement that we are not authorized to pay anybody's expenses. The Council ought to take cognizance of this and decide this question. At present we are paying only the expenses of Councilors. I think a free discussion of the entire matter would be very appropriate.

THE CHAIRMAN: I hope you will discuss this subject very freely and also the matter of expenses of delegates to the American Medical Association.

DR. J. M. SMITH: Would any discussion settle a matter of this kind? If it takes a by-law to settle this matter, this discussion would not avail us anything, and we might take the matter before the House of Delegates and make the necessary change to cover these expenditures.

THE CHAIRMAN: As I understand the Council is the financial body of the Association, and all laws have to be made by the House of Delegates. It might be well to discuss this matter here and see how the Councilors feel about it without taking any definite action so that we might the better inform ourselves. As it is no man in attending a committee meeting, outside of a council meeting, can get his expenses paid for anything. We have no provision for that whatever.

DR. MULHERIN: We can create a sinking fund and men serving on committees for the good of the Association, devoting so much of their time and attention, ought to have their expenses paid. It is an honor to be sent as a delegate to the American Medical Association. It will mean approximately 15 days away from home under heavy expense and I think the Medical Association of Georgia should stand that expense. I think all we would have to do is to give one day's notice to introduce an amendment in the House of Delegates to change the By-Laws covering this matter. I think some one should give that notice tomorrow.

I would like to hear from other members of the Council with reference to paying the expenses of committee men.

DR. LYLE: As our Chairman has stated, the Council is the only body who can authorize such expenses as may be necessary to be approved by the House of Delegates. A by-law is not necessary in my opinion. But inasmuch as a general discussion has been asked for, I would like to express my opinion in this way: if the members of the Committee on Medical Defense are doing more arduous work than any committee of the association, and work that is not of a scientific nature but purely of a business nature for the welfare and benefit of the Association in a business way, are not paid, I do not believe that the member of a committee should be paid his expenses. I consider it an honor for a man to be appointed on a scientific committee, not necessarily the committee on Scientific Work, but on any of the scientific committees of this Association, and I feel that the honor is well worth the small amount that he may be required to expend during his term as such a committeeman.

In talking with the members of the Committee on Medical Defense they state emphatically they would object to being paid for their work. They want to do that work and realize they are doing a great work for the Association. We all agree most heartily with the latter part of this statement I am sure, and I am simply expressing my personal opinion. I feel that a man serving on any of these committees should not expect to be paid for his services if these other men particularly are not paid.

DR. MULHERIN: I would like to ask Dr. Lyle this question: if they are paid, how would you feel about the compensation of the other men on the committee.

DR. LYLE: I feel as I stated before that a man should consider it an honor to be appointed on a scientific committee of the Medical Association of Georgia and it is well worth the small amount necessarily involved of having the honor of being selected as a delegate to an adjoining state associa-

tion. It is well worthy of the small expense incident to going to such a meeting and it is a positive advantage and benefit to the man who attends such a meeting. I feel these men are doing work that is purely of a business nature, and I would not be adverse personally to their receiving compensation just as we would pay our attorneys, but I do not feel that the other matter is really a thing the Council should authorize payment of. That is my personal opinion.

THE CHAIRMAN: I would like to hear further discussion by the members of the Council. We cannot take any action at all.

It will have to go before the House of Delegates for discussion and referred back to us so that we may act more intelligently in the morning.

DR. MULHERIN: Does the chair wish some one to introduce a notice of a change in the by-laws or bring it up by way of motion.

THE CHAIRMAN: Yes, by motion in the House of Delegates.

DR. LYLE: Is not the Council the financial body of the Association? Does it not have to recommend the expenditure of money subject to approval by the House of Delegates. As I understand the matter, the House of Delegates cannot in any sense consider the expenditure of money unless upon the recommendation of the Council. I am not sure that I am correct in this matter.

THE CHAIRMAN: It is the other way around. The House of Delegates should discuss it and refer it to the Council and then the Council take action.

DR. T. C. THOMPSON, Vidalia, offered the following resolution:

RESOLVED, That we ask that the Medical Practice Bill be amended so that all members of the Board of Medical Examiners shall sign the licenses of successful candidates, whereas at present the President and Secretary of the Board only sign them.

Also, that the number of members of the Board be reduced from 10 to 5. My reasons for this are that it places too much responsibility on two members of the Board when only the President and Secretary of the

Board sign licenses. If the entire membership of the Board signs licenses, there could never arise any criticism.

The composite board consists of five regulars, three eclectics, and two homeopaths. The composite board has been created for ten or eleven years, and during this entire time I understand the Board has not issued a single license to any except regulars; that no applicant has asked for eclectic or homeopathic examinations. I further understand that there are only a very few homeopathic physicians in the state, and that there are not over two or three hundred of the homeopaths and eclectics combined. I believe there are over 3,000 regulars in the state. Taken in round numbers there are 250 irregulars and 3,500 regular physicians in the state, yet the irregulars have equal representation on the Board of Medical Examiners, and during the existence of the composite board, no applicant has asked for an eclectic or homeopathic license; therefore, I think the Board should be reduced to five and the irregulars be represented on the board in ratio to their corresponding number of physicians in the state.

THE CHAIRMAN: You have heard these resolutions. What will you do with them?

DR. SMITH: I move that they be referred to the Committee on Public Policy and Legislation.

Seconded by Dr. Mulherin and carried.

DR. LYLE: There is one other point I desire to call attention to and, if necessary, to introduce a resolution. I feel there is some necessity for it because of the number of questions I have had put to me, and yet it is not a subject that I am in any sense interested in other than of a general nature. But these questions come more particularly from doctors in the country towns. They are seeking to know about a certain subject, and I can understand full well just exactly why it is they are to a certain extent at sea. In order to explain just what I mean, I would like to introduce a resolution before the Council at this time to the effect that a committee of three from the Council be appointed to select a commission to serve with-

out expense and report to the next meeting of the Medical Association of Georgia upon the present status of endocrinology.

That is my resolution, and in bringing it to your attention I wish to simply say this: Many doctors among my acquaintances over the state feel that this is a subject that is of a great deal of interest to them. They are reading a good deal about it and they are at sea. Some men are advocating some things and others are fighting them equally as much. Some men say that the pluri-glandular extracts are the things to use and others are recommending a particular extract. Some say you get just as good results by the stomach as if the medicine were injected into the vessel. Others say you cannot. The average country doctor cannot decide on these things except from personal experience which is one of the best teachers; yet, it seems to me, dame Nature accomplishes a great many things which we frequently attribute to the administration of medicine.

We happen to have in the State of Georgia some men that in my opinion are particularly well fitted to undertake such an investigation, and a report made by these men would carry a great deal of weight with the personnel of the Association throughout the state. I refer to such men as the professors of physiology in the medical schools in the state of Georgia; the superintendent of the insane, the superintendent of the School for Feeble-Minded, a good laboratory man, a good neurologist, and one or two internists, so that as a result of a number of questions that I have had asked me and a number of talks I have had with doctors throughout the State, I think this investigation would be of considerable service to them because they are wasting money in buying products that are useless and causing expense to their patients, and because much of this is altogether experimental, and the man at Smith's Crossroads is not in position to do experimental work. The men appointed on such a commission would be in such a position to fur-

nish reliable information. If I can get a second to this resolution, I would like to submit it.

THE CHAIRMAN: I would like to read at this time section 7 of the by-laws under House of Delegates which says, "it shall encourage postgraduate and research work and home study and give the results."

This is a matter that ought to go before the House of Delegates instead of the Council.

It was moved and seconded that the resolution be referred to the House of Delegates. Carried.

DR. ELROD: In looking over the directory for 1923 I find that there are 50 counties not reported in our Journal. It seems to me, we should get some report of why other counties have not made a report. I am satisfied that possibly some of them are reporting somewhere else. Why should we have a bunch of 30 or 40 counties not marked or reported on? My hobby is more members for the Medical Association of Georgia. Some of them are good counties. If the Councilor would get in touch with some of these counties he might get a whole lot of members. We might drag in a few more men, and that is the reason I am bringing this matter up. There are many counties we did not get a report from, and surely there are men there whom we should get into the society if we would get a little more active in our work.

DR. HAMMOND: In my verbal report of the Seventh District I said there are two counties that are not organized, Dade and Catoosa. One of these counties has only two doctors. Catoosa has four, three of whom are affiliated with two other counties, and one is not a member at all.

Adjourned.

PROCEEDINGS OF THE HOUSE OF DELEGATES.

WEDNESDAY, MAY 2, 1923—FIRST MEETING.

The House of Delegates met at 9:15 A. M., and was called to order by the President, Dr. J. M. Smith, Valdosta.

The first thing in order was the report of the Committee on Scientific Work, Dr. A. G. Fort, Atlanta, Chairman.

DR. FORT: Your Committee on Scientific Work presents the program as its report. The titles of a number of papers came in after the day had been set for not receiving any more papers, consequently they could not be placed on the program. Some papers were presented in proper time but the authors of them had not paid their dues, and hence they were not eligible to present them. We have done the best we could and hope the program will meet with your approval.

THE PRESIDENT: You have heard the report, what will you do with it?

DR. MULHERIN: I move that it be adopted as presented.

Seconded and carried.

THE PRESIDENT: Report of the Committee on Medical Defense, Dr. M. A. Clark, Macon, Chairman.

Dr. Clark read the minutes of the Committee on Medical Defense, April 19, 1923, as follows:

The Committee on Medical Defense met in the office of the Secretary-Treasurer, 65 Forrest Avenue, Atlanta, April 19, 1923. The Committee was called to order by the Chairman, Dr. M. A. Clark.

Those present were: Dr. M. A. Clark, Dr. E. C. Davis, Dr. V. O. Harvard, Dr. E. C. Thrash, Dr. Allen H. Bunce.

The Secretary read the final report on the case of Elrod vs Grubbs. After some discussion the Secretary-Treasurer was directed to refund to Dr. L. F. Grubbs all expenses incurred in the trial of this case except the indemnity.

The present status of the various cases pending against members of the Association was reported. No case has been lost by the Association up to date except the one against Dr. Grubbs, which was instituted in 1919.

A letter was read from Dr C. B. Crawford, of Blue Ridge, complimenting the Attorney of the Association for the excellent work in his behalf. His case was won without a jury trial.

The Secretary reported a new case of Lee vs Batty from the Richmond Superior Court of Augusta. This case came to trial on April 23rd, four days after the meeting of this Committee and was won by the Association.

It was unanimously decided that the Chairman should appear before the House of Delegates at the Savannah meeting and request an appropriation of \$3,000.00 for the use of the Committee for next year.

There being no further business, the meeting adjourned.

Dr. Clark further said: In the past year I am glad to report that we have not had so many suits as the previous year, and all the suits, except two, have been settled out of court. In one of the suits a moderate amount of damages was awarded, and it was a question whether the damages be paid by the defendant or whether we should appeal. On the question of appeal we lost the case and there was a certain amount of damages awarded.

As to medical defense, the fact that the Medical Association of Georgia is back of these cases and defending these men has met with strong support, and we have had no trouble in getting nearly all the cases settled out of court.

We are very fortunate in having attorneys who take great interest in the work, and whose services are valuable indeed and save us great expense in attorneys' fees.

We have a few cases still pending, but do not know how they will come out. We shall try to deal with them wisely and judiciously.

The majority of the suits brought are the result of some physician's unintentional criticism of the conduct of an attending physician, and in his efforts to appear wise he says things that are misconstrued by the laity and cause suits to be instituted against us. We had quite an expensive suit as the result of a prominent physician making a criticism of what was done. Acting on that criticism suit was brought, but when it came time to testify he would not do it.

We thoughtlessly make remarks at times. We all have a little vanity ever since Mother Eve tempted Adam to eat an apple, and we make remarks we do not really mean, and I hope you men will encourage the profession to be more careful so as to save us much trouble and a good deal of expense.

Your Committee is glad to say, we have kept so far within the appropriation this year, and we are going to ask for the same appropriation of \$3,000.00 next year. That will enable us to prosecute the quacks in Georgia.

As the Association is getting financially able we can set aside a sinking fund to be used by the Committee on Medical Defense in case of emergency rather than for this work.

I wish to say in behalf of the Committee that the members have responded to every meeting; they have been prompt in their attendance and helpful in their advice.

The Association is doing more and more toward the building up of the medical defense feature, and the members of the profession are becoming more and more interested in it in every way possible. However, we do not want to be extravagant in asking funds for the use of the committee. The Committee is using no funds for the expenses of the Committee. The fund is used for the expenses of suits. As I have read to you, Dr. Crawford appreciates the Medical Association of Georgia now as he never did before.

THE PRESIDENT: You have heard the report of this Committee. What will you do with it?

DR. E. T. COLEMAN: I move its adoption. Seconded.

DR. MULHERIN: In keeping with Dr. Clark's suggestion, Dr. Lyle suggested last night that a sinking fund be created to help out the Committee on Medical Defense.

DR. LYLE: In connection with what Dr. Mulherin has said, I will say that I made a motion last night at a meeting of the Council that inasmuch as we have a sufficient amount of funds at this time, we create a sinking fund of \$1,000.00 or such an amount

as might be decided on by the President, the Chairman of the Council, and the Secretary-Treasurer, this amount to be set aside for the use of the Committee on Medical Defense or for such other purpose as the Council might determine. I believe that was recommended by the Council last night.

THE PRESIDENT: That would come up as an amendment to the report of the Committee. Is there any further discussion?

DR. LYLE: I move that \$1,000.00 be set aside for the use of the Committee on Medical Defense or for such other purpose as the Council may determine upon in an emergency. That was the motion I made last night at the meeting of the Council.

DR. CLARK: The only way the funds can be appropriated is by the House of Delegates after approval by the Council. As I understand, the Council anticipated this and took action last night at its meeting and approved of it. The only objection to the suggestion of Dr. Lyle is a definite amount. The Council cannot do it without the authority of the House of Delegates.

DR. LYLE: When this came up, my original resolution was to set aside a thousand dollars. Something may occur in the meantime to make it necessary to use some of the funds. The motion was amended to set aside \$1,000.00 or as much thereof as was felt could be set aside, the amount to be determined by the officers.

THE PRESIDENT: The question is on the adoption of the report, and after its adoption we can take up the motion of Dr. Lyle.

The motion to adopt the report was put to a vote and carried.

DR. E. C. THRASH: Inasmuch as we have a good deal of business to transact, I move that future discussions be limited to two and a half minutes on all questions.

Seconded and carried.

THE PRESIDENT: We will now have a report from the Chairman of the Committee on Public Policy and Legislation.

Dr. Frank K. Boland, Atlanta, presented the following report:

Mr. President and Members of the Medical Association of Georgia: The following is the report of the Committee on Public Policy

and Legislation for the fiscal year 1922-23: No indication for active work having been brought to the attention of the Committee during the year, it held no meeting until May 2, 1923. However, the Chairman has been in communication with the members of the Committee during the past twelve months, giving them information and asking for suggestions and advice. It has been brought to the attention of the Committee that the Chiropractors of the State, in some places, have not been living up to the requirements of their own laws. Correspondence with the secretaries of the various county societies, however, has failed to produce evidence which would convict any chiropractor. So far we have only hearsay evidence. It is urged that the members and society officials throughout the state, call the attention of this Committee to violations of this kind, which are susceptible of prosecution. The Committee feels that it would be a wise thing if our By-laws should be amended, so that the Committee on Public Policy and Legislation could be appointed earlier in the year. Usually the main work for the Committee to do is during the session of the Legislature. As the Committee is not appointed until about a month before the Legislature meets, it does not have time to get organized and acquaint itself with needed legislation. We believe the Committee should come into existence the first of the year instead of the middle of the year, and should hold office for more than one year, probably three.

The Bureau of Legal Medicine and Legislation of the American Medical Association reminds us that the United States Government is sanctioning the attendance of disabled ex-service men at schools of chiropractic, as a means of vocational training. We recommend that the following resolution be adopted as our vigorous protest against this state of affairs:

WHEREAS, we learn that the United States Government sanctions the attendance of disabled ex-service men at schools of chiropractic, as a means of vocational training.

RESOLVED, That the Medical Association of Georgia, at its annual meeting in

Savannah, May 2-4, 1923, an organization representing more than 1500 legally qualified physicians, of adequate training in the arts and sciences for the recognition, cure and prevention of disease, petition the Federal Government, particularly those officers charged with the responsibility for the rehabilitation of disabled ex-service men, to take such action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, that the ex-soldiers seeking vocational training, which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall, at least, meet the requirements and shall receive such adequate training as is defined in the classification of medical schools of the United States, known as Class A, or acceptable medical schools—a standard which is approved by all right thinking people moved by a desire for public welfare.

As suggested in a paper read by Dr. L. A. Baker, of Tifton, Georgia, at a recent meeting of the Second District Society, we recommend that the next succeeding Committee on Public Policy and Legislation have introduced in the Legislature an amendment to the present act providing for the compensation of physicians who perform autopsies for coroners, whereby said physicians may receive more than \$20.00 compensation for such autopsies. At present, it seems that \$20.00 is all that is allowed for this work. Certainly, a thoroughly performed scientific autopsy is worth more than this.

Also, as suggested in a paper of Dr. Baker, it seems that there is no law providing compensation for physicians who give expert testimony for the state. As Dr. Baker well says, physicians pay taxes for the privilege of practicing medicine in Georgia, and give a great deal of their services without pay to its citizens. Therefore, they certainly are entitled to fair compensation for their services when demanded by the state.

At the same meeting of the Second District Society, Dr. H. L. Spengler, of Donaldsonville, Georgia, read a paper in which he urged that the milk supply of Georgia should

be examined by the Board of Health instead of by the State Veterinarians. This is a matter worthy of serious consideration and we trust it will be taken up by our successors in office.

We are in receipt of a letter from Mrs. H. L. D. Kirkham, of Houston, Texas, who is corresponding Secretary of the Woman's Auxiliary of the American Medical Association. Mrs. Kirkham requests us to present a resolution before the House of Delegates authorizing the formation of the Woman's Auxiliary of the Medical Association of Georgia, as outlined at the last meeting of the American Medical Association in St. Louis.

It seems that the objects of this Auxiliary are to extend the aims of the medical profession to the wives of the doctors; to the various women's organizations which look to the advancement of health and education; to assist in entertainments at state, district and county society meetings; to promote acquaintanceship among doctors' families, that local unity and harmony may be increased.

The Committee on Public Policy and Legislation can see no objection to the formation of such a Woman's Auxiliary. We, therefore, recommend that the President appoint a committee to look into the matter, with or without power to act, as the House of Delegates may direct. The present committee has further data on the proposition which might be of assistance in formulating rules to cover the new organization.

Respectfully submitted,

F. K. Boland, Chairman.
J. M. Spence,
A. J. Waring,
J. M. Smith,
A. H. Bunce.

Committee on Public Policy and Legislation.

THE PRESIDENT: What will you do with this report?

DR. E. C. THRASH: I move its adoption, and that the new committee report to the House of Delegates one year hence.

Seconded and carried.

DR. THEODORE TOEPEL, Atlanta, Chairman, presented the report of the Committee on Health and Public Instruction, as follows:

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

At the last meeting of the House of Delegates in Columbus, Georgia, the matter of tonsil and adenoid clinics was referred to this Committee for consideration and adjustment. A recommendation by this Committee was submitted to the Council for adoption. The report was adopted and the action of the Council was made known to the county societies. It has been shown that this act has not met the requirements and your Committee recommends the following for your adoption:

1. As the county society is the unit through which the practice of all medicine is encouraged and guarded, we recommend that the initial work of establishing clinics may be done by the State Board of Health, but the supervising of charity and semi-charity clinics shall be confined to the respective county medical societies. In such counties where no organized medical societies exist, and the need of establishing a free clinic may arise, we further recommend that the county shall appeal to the councilor of that district who shall be vested with executive authority to establish and conduct the needed clinic.

2. The subject of teaching health through the avenues of the public schools and lay associations has received considerable attention by your Committee. We feel that by establishing a permanent contact with like committees from the State Educational Association and lay associations, such as the State Federation of Women's Clubs, State Parent-Teacher Association, etc., for the purpose of considering together the many problems in health education, we will be able to give helpful advice directly to the people.

By a close cooperation of the Medical Association of Georgia, the State Board of Health and the State Department of Education, a greater influence can be brought to

bear upon all concerned to disseminate only such medical information as is supported by scientific investigation.

We, therefore, ask you to approve the efforts of your Committee in bringing about a closer relation of our Association with lay bodies by organizing county units for the purpose of directing the health education therein.

3. Your Committee has noticed with pleasure and gratification the efforts made by the Committee on Reorganization of the Federal Departments. We, therefore, recommend to you for adoption the following: We, the members of the Medical Association of Georgia, in annual session at Savannah, Georgia, May 2-4, 1923, endorse the efforts of the Committee on Reorganization of the Federal Departments to recommend to Congress the establishment of a Department of Education, Health and Welfare, with a secretary in the cabinet, and an assistant secretary, which would consist of four bureaus, education, health, welfare and veteran's bureau, and we instruct our secretary to notify the two senators and twelve congressmen of Georgia of this action and to ask their support of this measure when it comes up for action.

Respectfully submitted,
Theodore Toepel, Chairman.
W. A. Mulherin,
F. F. Floyd.

The Committee recommended the following changes in the By-Laws and Constitution:

BY-LAWS

Chapter VI, section 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. The three members, one of whom shall act as Chairman of the Committee shall be elected by the Council for the period of three years; those elected at this meeting (May 4, 1923) shall serve three, two and one years respectively. Under the direction of the Council and the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of public health and scientific medicine. It shall

keep in touch with professional and public opinion, shall endeavor to shape legislation as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Section 6. The Committee on Health and Public Health Education shall consist of three members and the President and Secretary. The three members, one of whom shall act as Chairman of the Committee shall be elected by the Council for a period of three years. Those elected at this meeting (May 4, 1923) shall serve three, two and one years respectively.

It shall be the duty of the Committee on Health and Public Health Education to hold conferences with the State Board of Health and other bodies that are legally charged with the administration of health laws, to the end that the highest degree of cooperation may be secured between the legal health authorities and the medical profession, and that the interests both of the profession and the public may be safeguarded by a fair and just administration of public health activities.

It shall further be the duty of this Committee to disseminate through all legitimate channels such medical information as will most benefit the medical profession and the public. To properly execute this work, the Committee may incur such expense as may be authorized by the Council, not to exceed the amount of \$250.00 during the fiscal year.

CHANGES IN THE CONSTITUTION

Article V. House of Delegates.

The House of Delegates shall be the business body of the Association, and shall consist of (1) delegates elected by the component county societies; (2) the councilors, chairmen of the Committees on Scientific Work, Public Policy and Legislation, Medical Defense, and Public Health and Education, and (3) ex-officio the President, the Secretary, Delegates to the American Medical Association, and all ex-Presidents.

Theodore Toepel.

W. A. Mulherin.

F. F. Floyd.

THE PRESIDENT: What will you do with these two reports?

DR. THRASH: I move that the first report be adopted.

Seconded and carried.

DR. THRASH: I move that the second report be referred to the Committee on Constitution and By-Laws.

Seconded and carried.

Dr. J. L. Campbell, Chairman, Atlanta, presented the report of the Cancer Commission, as follows:

ANNUAL REPORT OF THE CANCER COMMISSION

Mr. President and Gentlemen: In making this, my annual report to the Association, it gives me great pleasure to tell you that the interest in cancer control has increased greatly during the last few years. Hundreds of doctors about the state are studying the disease, who a few years ago took it for granted that to have a cancer meant sure death.

During the year we have had the hearty cooperation of the American Society for the Control of Cancer. They have furnished us with quantities of literature which I have tried to distribute over the state. Dr. Bunce suggested to me that I insert one of their leaflets in the October issue of the *Journal*, which I did, and also, inserted copies of the same leaflet in the "*Journal of Labor*" issued during "cancer week." This leaflet, therefore, was well distributed over the state.

The Atlanta Journal has carried a series of articles on cancer and has promised to use others that we may wish published from time to time. In all of these articles we have endeavored to impress the public with the idea of consulting the family physician.

Early in the fall we wrote hundreds of letters and had articles sent to every county paper in the state. A letter was also sent to a member of the State Association living in the town in which the paper was published requesting him to see the editor and urge him to publish the article. So far as I know many of these were used by the papers.

During "cancer week," November 12 to 19, we made an unusual effort to have the

subject brought to the attention of the public. Each Commissioner was asked to appoint a county chairman to give public addresses when and wherever an opportunity presented. In Atlanta we found the members of the Fulton County Medical Society ever ready to help us. A short talk was made in many of the churches in Atlanta and in other cities throughout the state.

Early in the fall we had the misfortune to lose our chairman, Dr. George R. White of Savannah, because of ill health. Dr. White was State Chairman for the American Society for the Control of Cancer, and was keeping well in touch with the home office. When he resigned, your Chairman was asked to take his place which I did and we are now about to complete a state-wide organization which we feel sure will help keep the subject of cancer control well before both the doctors and the public.

At the last meeting of the Association \$100.00 was appropriated for the use of the Cancer Commission; we have spent the money for printing, copying, postage, etc. In addition I have spent considerable more for stationery and office help, but I am glad to do so as I feel that there is no better way to aid this important public health movement than to keep the subject ever before the public.

If we had a sufficient sum to furnish lantern slides and charts to each county society, or if we could send a speaker to the county societies to talk on the subject once during the year it would broaden the work and result in much good.

THE PRESIDENT: What will you do with Dr. Campbell's report?

DR. E. T. COLEMAN: I move its adoption.

Seconded and carried.

DR. M. A. CLARK: In studying the Constitution and By-Laws I find some of the members have a wrong impression as to special committees and standing committees. The Association should not have all standing committees. Your committees have reported as standing committees. You have authority

to appoint special committees from time to time and to appoint them at any definite time you wish. Section 9, Article III, of the Constitution, gives authority to appoint special committees composed of members who are not members of the House of Delegates. It is wise to have special committees, and if you wish to appoint the members of these committees for a term of five or three years you have a right to do so, and you have a right to make changes in the committees.

THE PRESIDENT: The next thing in order is the report of the Committee on the Crawford W. Long Statue, Dr. L. G. Hardman, Chairman.

DR. HARDMAN: I have no formal written report to submit at this meeting, but I would like to make a statement. The Crawford W. Long Memorial Association, which really has practically taken over the work of securing funds for the statue, has in the bank about \$5,000.00. The Chairman of your Committee met with the Committee of the Crawford W. Long Memorial Association in Atlanta in conference and a plan of procedure was worked out by this Association at that time. We have at this meeting a young lady who will take any subscriptions that any doctor may feel willing to contribute to this fund. It is the wish of the Crawford W. Long Memorial Association that this matter be completed as early as possible. They would like to get it out of the way, not that they feel tired of the work or that the work is not a worthy one, but they hope it may be gotten out of the way and pushed forward. So we hope every member of the Association and every delegate will use every possible effort to secure the remainder of the fund so that the monument may be completed at the earliest date. About \$10,000.00 is estimated as the cost of the monument. That is all I have to report.

THE PRESIDENT: You have heard this report. What will you do with it?

DR. E. T. COLEMAN: I move its adoption.

Seconded and carried.

THE PRESIDENT: We will now have the report of the Committee on Revision of the Constitution and By-Laws.

DR. M. A. CLARK presented the following report:

REPORT OF THE COMMITTEE ON REVISION OF THE CONSTITUTION AND BY-LAWS

Mr. President and Members of the House of Delegates: Your Committee appointed at our last annual meeting to revise the Constitution and By-Laws of the Association met in the office of the Secretary and Treasurer, on Thursday afternoon, March 8th, at 3:30 P. M. Those present were Drs. M. A. Clark, W. C. Lyle, J. M. Smith and A. H. Bunce. Dr. White was absent on account of sickness. The meeting was called to order by the Chairman, Dr. Clark. The entire Constitution and By-Laws were gone over, section by section, and the following changes were recommended.

CONSTITUTION

CHAPTER II. GENERAL MEETINGS

ARTICLE V. HOUSE OF DELEGATES.

After "(3)" omit the word "ex-officio" and insert "parliamentarian" after "Secretary" and add "(4) ex-Presidents and (5) delegates to the American Medical Association." The paragraph will then read, "The House of Delegates shall be the business body of the Association, and shall consist of (1) delegates elected by the component county societies; (2) the councilors; (3) the President, Secretary, and Parliamentarian of this Association; (4) ex-Presidents and Delegates to the American Medical Association."

ARTICLE VI. Council.

In the second line, after "Secretary" omit "ex-officio."

ARTICLE IX. OFFICERS.

In Section 1, line 3, after the word "Secretary-Treasurer" insert "Parliamentarian." Section 2, line 10, after the word "a term of five years" insert "and the Parliamentarian for a term of three years." Section 3, line 3, omit "3" and insert the figure "12." This refers to the time of election of officers on the third day of annual session.

Under this article insert "Section 4. Any member known to have solicited votes for, or sought any office of the Association shall be ineligible for any office for two years."

BY-LAWS.

CHAPTER II. GENERAL MEETINGS.

After Section 1, insert the following which are taken partly from Chapter VIII, Miscellaneous:

"Section 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Section 3. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Section 4. Guests. Any physician not a resident of this state but a member of his state association or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

Section 5. Order of papers. The order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until this has been completed, provided the papers of any meeting shall not encroach upon the papers of any subsequent meeting.

Section 6. Entertainments. This shall be the same as the present Section 2.

CHAPTER III. HOUSE OF DELEGATES.

Section 1. Change the first sentence to "The House of Delegates shall meet on the day preceding the first day of the Annual Session."

CHAPTER IV. DUTIES OF OFFICERS.

Section 3. Omit the last sentence which reads, "He shall pay money out of the treasury only on a written order of the President."

CHAPTER V. COUNCIL.

Section 2. Add the following sentence to the end of this section, "Each Councilor may appoint a Vice-Councilor to assist him in performance of his duties in that district."

Section 3, line 12, after the word "Councilor" add "or to which attention has been called by the Councilor or interested members." At the end of this section add the following sentence, "It shall hear and decide all questions affecting unethical conduct on the part of any member at any annual session."

Section 5. Change the last sentence to read "In the event of a vacancy in the office of Secretary-Treasurer the Council shall fill the vacancy until the next annual election."

Change section 8 to section 10. Change section 9 to section 8. Change section 10 to section 9.

CHAPTER VI. COMMITTEES.

Section 2. Omit the last line which reads "No such address or paper shall exceed the time limit fixed by the Committee on Scientific Work."

CHAPTER VII. COUNTY SOCIETIES.

Change section 6 to read as follows: "No matter what unethical conduct or discipline of the members of the County Society, both plaintiff and defendant shall have the right to appeal to the Council and its decision shall be final when ratified by the Association."

CHAPTER VIII. "RULES AND ETHICS" are to be substituted for "Miscellaneous." Make the present section 3 section 1, add section 2, "The principles of Medical Ethics of the American Medical Association shall be those of this Association."

Add section 3, "Any member of this Association on locating in a new place for practicing his profession may place his professional card containing name, address, telephone number and statement as to whether or not his practice will be limited to any particular class of diseases in the local paper for a period not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper,

telephone directory or other public places shall be considered unethical.

DR. LYLE: I listened carefully to the reading of the report to see whether or not in this revision of the By-Laws there was anything which conflicts with the proposed provision of the Constitution, and there is not in the existing by-laws, and there is no reason why, if this is laid on the table for a day, these changes in the By-Laws cannot be made.

THE PRESIDENT: This matter is really not open for discussion.

DR. LYLE: I was going to ask that instead of letting the matter lie over until next year, it be taken up at the regular meeting of the House of Delegates tomorrow. There is nothing in conflict with the proposed changes in the Constitution.

DR. CLARK: This Committee does not know what the Association is going to do next year in reference to these changes. If you are going to be the business body of the Association, get the charter first. The Constitution is your charter. Let us adopt the charter first, and then take up the By-Laws. We are really out of order.

DR. LYLE: I would request that this matter be taken up after due notice of twenty-four hours has been given.

DR. CLARK: Your Committee has made a unanimous report that this Constitution and By-Laws lie over until next year, thus giving the members an opportunity to study it thoroughly and to act upon it at that time.

THE PRESIDENT: In view of the fact that Dr. Lyle does not submit a minority report, the Chair rules that this matter cannot be discussed at this time.

DR. LYLE: As a matter of personal privilege, I never for a moment contemplated making any minority report, and I am entirely in accord with the other members of the Committee. It never occurred to me there would be any objection to the consideration of changes in the By-Laws inasmuch as this revision of the By-Laws does not conflict with the present constitution or with the proposed changes which have been made in the present con-

stitution. The changes in the by-laws are of such importance that they ought to be made effective as soon as possible. While I do not insist, I feel the House of Delegates should be given an opportunity to bring the matter up in twenty-four hours which our by-laws allow us to do.

DR. THOMAS J. McARTHUR: I move that this matter be laid over until next year.

Seconded and carried.

DR. A. G. FORT: The Scientific Committee requested the Savannah Medical Society and the Medical Association of Georgia to invite a guest this year, and they saw fit to invite Dr. Louis M. Warfield, of Ann Arbor, Michigan, and I move that the House of Delegates ask the Council to appropriate a sum not to exceed 100.00 to defray Dr. Warfield's expenses. Seconded.

DR. GRADY EDWARD CLAY: I move as an amendment that Dr. Warfield's expenses be paid regardless of whether they exceed \$100.00 or not. Seconded.

DR. CLARK: All matters of finance come before the House of Delegates and are referred to the Council, whose members are the Finance Committee. After the Council makes its report the House of Delegates can act.

DR. E. T. COLEMAN: I move that the matter be referred to the Council.

Seconded and carried.

On motion, the House of Delegates adjourned until 3 P. M.

WEDNESDAY AFTERNOON, MAY 2, 1923—SECOND MEETING.

The House of Delegates met at 3 P. M., and was called to order by the President.

Dr. V. O. Harvard, Arabi, reported for the Council. He said: I did not know I was expected to make a report of the work of the Council at this time. I am going to give you a short summary of the work that has been done by the Council, a full report of which will appear in the proceedings. We have the largest number of paid up members to date that we have ever had, namely, 1414. In the state there are 156 counties, all of them organized except 30 or 40 counties

that are still unorganized. We have done better work this year than any year since we have been running the Association. I think our Medical Defense feature has played a large part in bringing up the membership to what it is. We should keep that up and stress it at all times. Some of you may not know that the Committee on Medical Defense has done valuable work in defending suits. Many suits have been brought, but nearly all of them have been settled out of court. Only one man had to pay a small amount.

THE PRESIDENT: What will you do with this report?

DR. COLEMAN: I move its adoption.

Seconded and carried.

DR. LYLE: It will be necessary for the House of Delegates to approve the actions of several things that were brought up at a meeting of the Council last night, and I would move that the House of Delegates appoint a committee consisting of the President of the Association, the Chairman of the Council, and the Secretary-Treasurer to handle this question of investing a thousand dollars or as much as they can set aside at the end of the year.

Seconded by Dr. Coleman.

DR. BUNCE: I move to amend that one thousand dollars or such portion thereof be made available as determined by the President, Chairman of the Council, and the Secretary-Treasurer. Seconded.

DR. THOMAS J. MCARTHUR: What is the purpose of setting aside this fund?

DR. LYLE: I made this motion at a meeting of the Council, and the motion carried with it that a sinking fund be set aside for the use of the Committee on Medical Defense. My reason for making the motion was that this committee has had to skate on thin ice. There have been quite a number of suits brought against members of the Association. We do not know what may happen at any time, and this committee would feel a sense of satisfaction in knowing they had a bank account for an emergency. To my mind this Committee is the most important of any committee of the Association. It handles more business than any committee of the Associa-

tion. The interest it represents is greater than any committee of the Association, and altogether I think perhaps it is the most important point that we have as an argument for increasing our membership and in retaining the members who are already members of the Association. It was on that ground I made this motion.

The motion as amended was put to a vote and carried.

DR. LYLE: I move that the Council appoint a committee of three to select a commission to investigate and report at the next meeting of the Medical Association of Georgia on the present status of endocrinology.

We have some men in the State of Georgia that are especially fitted to serve on this commission and give valuable information, such as the professors of physiology of the medical schools of Georgia, the superintendent of the school for mental defectives, and the superintendent of the state sanitarium. These men could act and make a report at the next meeting. (Motion seconded.)

DR. B. H. WAGNON: I see no objection to the selection of a commission to study endocrinology and report back next year, except for the fact that if we are going to select a commission to study endocrinology, why not select a commission to study pneumonia and report back to the Association next year. I feel we are getting a little top heavy in having such a commission. We have already a commission on cancer, and if we have a commission to study endocrinology, there is no telling where it will stop, and some member next year may ask for a commission to study measles, pneumonia or typhoid fever. While I have no objection to the appointment of this commission I do not see its practical use.

Motion put to a vote and carried.

Dr. T. C. Thompson presented a resolution. (See minutes of the Council.)

It was moved that the resolution be referred to the Committee on Public Policy and Legislation. Seconded.

DR. LYLE: It strikes me that if this resolution goes to the Committee on Public Policy and Legislation it goes with our sanction, and I would move as an amendment that it

be referred to this Committee with power to amend. Seconded.

DR. GEORGE L. ECHOLS: If you are going into a revision of the law regarding applicants for license, I would recommend that psychiatry be added to the examinations. I am more interested in that subject probably than any man in the state. The general practitioner is beginning to realize fully the necessity for a closer and more careful study of mental diseases, and it should be one of the requirements. Would it be in order to further amend the motion to include psychiatry in the State Board examinations?

THE PRESIDENT: Your proposition has no relation to this resolution, but you could introduce a separate resolution covering that feature. I will ask our Parliamentarian to say a word in regard to that.

DR. CLARK: We could further instruct the committee that psychiatry be added to the examinations.

DR. THOMPSON: I accept that.

DR. McARTHUR: I do not understand what the doctor has in mind. I have a son who will soon take the State Board examination, and I would not appreciate having a homeopath and eclectic on the Board. I would prefer to have his license signed by regulars.

DR. THOMPSON: I would like to ask Dr. McArthur how he would like the President and Secretary of the Board, made up of homeopaths or eclectics, to sign his son's application? The object is to eliminate eclectics and homeopaths on the Board.

DR. COLEMAN: The present President of the Board is an eclectic.

The original motion as amended was then put to a vote and carried, and the resolution was so referred.

Dr. W. C. Lyle presented a report as delegate to the St. Louis meeting of the American Medical Association. (This report in full will appear in the next issue of the Journal.)

THE PRESIDENT: What will you do with the report of the Delegate to the American Medical Association?

DR. COLEMAN: I move its adoption.
Seconded and carried.

The Secretary-Treasurer presented his report which he had submitted to the Council last night, showing 1414 paid up members to date.

THE PRESIDENT: What will you do with this report?

Dr. Thompson, at the conclusion of the report stated that the Auditing Committee had examined the books and accounts of the Treasurer and had found them correct.

It was moved and seconded that the report of the Auditing Committee be adopted.

Seconded and carried.

Under the head of "new business," Dr. Gibbs said: A paper by Dr. L. G. Hardman was omitted from the program, and I have been told by our Parliamentarian that this could be corrected, and I would appreciate very much if it can be. I am convinced that Dr. Hardman has something to say which will be of great interest to the Association, and I would like to ask that Dr. Hardman be given the privilege of making an explanation. I have a letter stating that Dr. Hardman's dues were paid.

DR. HARDMAN: I approached the President to have two papers placed on the program at this meeting which came in too late, and under the regulations they could not be placed on the program. There was a request of the Vice-Councilor from the Ninth District that I be permitted to present this paper and have it put on the program at this time. The subject of the paper is "Industrial Medicine and Surgery." I do not believe there is anything that will contribute more to the progress, from a financial point of view, of our state right now than to have a commission or a committee in the State of Georgia from the Medical Association of Georgia for the purpose of passing on any problem looking to the building up and improvement of industrial manufacturing and manufacturing generally in the state of Georgia. Georgia stands now third as a manufacturing state in the southern states. North Carolina, Alabama and Virginia are now ahead of Georgia in the progress of textile and other manufacturing industries. There has not been a time when the physicians of Georgia have been so placed that they can render so much service in look-

ing to the development of Georgia as right now. Every man that invests his money in Georgia has the government to pass upon the conditions that exist here in Savannah, and he wants to know whether the place in which he builds his manufacturing plant is sanitary; that the buildings are constructed upon modern sanitary lines. There has never been a time when the doctors of Georgia can do so much looking to the development of Georgia and getting us out of the crisis that exists, and my paper includes that line of thought.

DR. CLARK: You have kindly allowed Dr. Hardman to make his statement, which is a great consideration on your part, but it is out of order. There was an order of business adopted this morning and ratified by the general body. It is the order of business for this session. You can only change the order by a two-thirds vote. It is not debatable, cannot be amended, and can only be acted on by this body and ratified by the general body before the order of business can be changed. Without change, nothing else can be allowed on the program. It is the opinion of your parliamentarian that it is wise for a body to sustain the action of the various committees. The question of finding a way to give Dr. Hardman an opportunity to read his paper is the only motion that can be entertained.

DR. HARDMAN: I asked the Vice-Councilor from the Ninth District to withdraw that request.

DR. GIBBS: I may have misunderstood our Parliamentarian, but I understood that by a two-thirds vote of the members of House of Delegates this matter can come up for consideration, and I would like to ask Dr. Clark the best course to pursue to go ahead with this business.

DR. CLARK: You have a right to make a motion to change the order of business.

DR. GIBBS: I would like the House of Delegates to pass on this at the earliest possible moment and have it brought to the attention of the general meeting.

DR. BUNCE: What is this paper to take the place of on the program?

DR. GIBBS: I understand it will take the place of the first absentee on the program. I

move that the order of the day be changed to enable Dr. Hardman to read his paper at the close of this session.

Seconded and carried.

On motion, the House of Delegates adjourned until 9 A. M., Thursday, May 3.

THURSDAY, MAY 3, 1923—THIRD MEETING

The House of Delegates met at 9 A. M. and was called to order by the President.

The Secretary read the minutes of the two previous meetings which were approved.

Dr. Theodore Toepel said that the Committee on Health and Public Health Education desired to change the report it submitted yesterday, and to introduce the following resolution:

The Committee on Health and Public Health Education shall consist of three members and the President and Secretary. The three members, one of whom shall act as Chairman of the Committee, shall be appointed for a period of three years. Those appointed this year (1923) shall serve three, two and one years, respectively.

Your Committee asks for an appropriation of \$250.00 to be spent under the direction of the Council.

It was moved that the resolution be adopted, and that the matter of appropriation be referred to the Council.

Seconded and carried.

DR. J. L. CAMPBELL: With regard to the Cancer Commission, I desire to make a statement. In my report to the House of Delegates I made mention of the fact that the Association appropriated \$100.00 for the use of the Cancer Commission during the past year, and I recommended that we had some further work to do this year and stated that we would be unable to do it unless we had money to do it. Dr. Bunce suggested that I ask for a definite sum with which to carry on this work. I want to ask this morning for the sum of \$150.00 to be spent by the Cancer Commission in the work for the coming year. We need charts; we need to carry on a great deal of correspondence. The American Society for the Control of Cancer has appointed me State Chairman and has formed a permanent organization for the state. This

has nothing to do with the state organization, but these two organizations or commissions can work together. Most of the men who are permanent chairmen of the National Society are on the Board of Commissioners. If you give us \$150.00 I can from time to time send charts, lantern slides and specimens to the various institutions, to the various districts or county societies, and they would be instructive to the physicians and to the public, and I trust the members of the House of Delegates will give me that amount of money.

It was moved and seconded that the matter of appropriating \$150.00 for the Cancer Commission be referred to the Council for action. Carried.

DR. FRANK K. BOLAND: I would like to say a few words about the Crawford W. Long Memorial Association. This Association was organized last year through the efforts of Dr. Jacobs and two daughters of Dr. Long, who live in Athens, and some other ladies. They have given the matter a great deal of attention and have collected contributions to the extent of \$2,000.00. Efforts are being made to raise the fund to \$10,000.00. We have appealed to all members of the Medical Association of Georgia and they have contributed approximately \$1,500.00. We have about \$5,000.00 in the bank at present. It will take \$10,000.00 to put this project over. It is unnecessary to go into the merits of this matter, as I think everyone is cognizant of the claims of Dr. Long, and there was failure to carry out the resolution passed by the legislature twenty-one years ago. I come to you with an appeal. It seems that in 1906 this matter was brought before this Association and a small fund of \$150.00 was used as a prize essay fund, and that much was left over. Dr. Westmoreland, the Chairman, raised this fund. As I understand, the House of Delegates voted to give this amount of money to the Crawford W. Long statue. We have no record of the transactions of 1906 regarding this matter. I believe Dr. McArthur was President at that time. He does not remember it. The only record is in Dr. Westmoreland's memory, and the record of his report, and he is reasonably sure that this

amount of \$150.00 was voted for this purpose. Through the efforts of these young ladies we have raised \$190.00. I hope we can carry back with us a contribution of at least \$500.00 from the Medical Association of Georgia. The doctors can and certainly ought to give at least \$2,000.00. I make the request now for the Crawford W. Long Memorial Association that we raise enough money to make up \$500.00 in addition to the amount we collect out here with the assistance of the young ladies.

DR. CLARK: Dr. McArthur presided in 1910. When the question of reorganization came up nothing was said about the Crawford W. Long Memorial Committee, and the question arose whether that committee was instituted, and the Association ruled it was. It is believed the \$150.00 of this Committee belongs to the Crawford W. Long statue, with Dr. Westmoreland as Chairman.

THE SECRETARY: Was the money paid out of the treasury or was it in the treasury of the Association?

DR. CLARK: I do not recall the treasurer's report after that; I simply recall what Dr. Westmoreland did. It has not been paid and the sum is still in the treasury.

DR. THRASH: I move that Dr. M. A. Clark be appointed a committee of one to make an investigation of this matter and report it to the Council, finding out whether the \$150.00 was paid or not and the advisability of making this appropriation. Seconded.

THE PRESIDENT: The Medical Association of Georgia has been slow to act in the matter of raising the money to finish the statue of Dr. Long. We have a lot of outsiders who have contributed more toward the movement than we the doctors of Georgia. We ought to have a free discussion on this matter. While it may not be in order, and while this fund may not be appropriated for this year, as it will be referred to the Council, still the members of the House of Delegates should give free expression to their opinion along this line.

DR. BOLAND: I may say that Dr. Hardman contributed \$250.00 this year besides all the other things he has done.

The motion of Dr. Thrash was then put to a vote and carried.

DR. THRASH: I would like to introduce a resolution to the effect that the citizens of Georgia be asked to contribute toward this fund, and that the Secretary prepare a suitable resolution as coming from the House of Delegates to be given to the newspapers and the Associated Press regarding the Crawford W. Long statute. Seconded.

DR. CLARK: Is it not true that women's clubs are taking up this work and are raising funds?

DR. HARDMAN: That is true. The \$5,000.00 now in bank includes the amount obtained by different women's clubs. I rather hesitate to speak on the subject, although the President has asked me to say a word. I feel such a great personal interest in this matter on account of having been in close touch with Dr. Long during his life time and am now living in the county in which the discovery was made and which now stands as a monument to the memory of Dr. Long, and having participated in these matters, I hesitate to speak upon them. I will say, however, that there is no subject that interests me more, that enthuses me more than the great interest and sympathy I have toward this work. You will pardon me for saying so, but I happened to be one of the committee twenty years ago that recommended the placing of the statue to Crawford W. Long in the Hall of Fame, and I was then in touch with the work from beginning to end. I may say further that in the history of the Medical Association of Georgia Dr. Long in 1877, when the Association met at Atlanta at the old Martin House, it was my first entrance into the Medical Association of Georgia, and Crawford W. Long attended that meeting and was voucher for me as I could not get into the Association without having two vouchers, and Dr. Long and Dr. Smith of Athens were my vouchers in entering this body. I feel such great love for that great man that nothing would give me greater pleasure and make me happier than to be able to go to Washington and see this great man of God and humanity, the Crawford W. Long statue, there standing. Speaking for myself, I cannot see how the

doctors of Georgia, in the interest of their profession, in the interest of humanity, can longer let this matter lag. I hope every one here will go back to their homes and if needs be go into their pockets now and see that this thing is put over now and forever. (Applause.)

DR. THRASH: I want to say in this connection that publicity means everything. Every bit of publicity we can get in the newspapers will go more nearly toward making a success of this movement than any other one thing, hence the resolution I have introduced.

DR. LYLE: I suppose this is a discussion of Dr. Thrash's motion. I want to ask a question and may be Dr. Hardman can enlighten us. Somehow I am under the impression at this time that a statue has already been placed in the Hall of Fame to Morton. If so, I want this body to insist on money being raised and to have the American Medical Association or some other organization investigate this matter and give the credit to the proper party. Whether that has been done or not, I do not know. I simply ask for information.

DR. BUNCE: It has not been done.

DR. CLARK: This statue of Long is one of the few statues that Georgia is entitled to have in Washington regardless of what has been done anywhere else. The names of Alexander H. Stephens and Dr. Crawford W. Long were recommended twenty years ago. I may say that there is a statue erected in Boston to the unknown discoverer of anesthesia. It stands in that way on account of a discussion that originated concerning Long, Wells, and Jackson. There are few monuments, one erected to Wells whose discovery was made in 1844, while Long's was in 1842. There is no statue erected to Long except the two in Georgia, one at Athens, and one at Jefferson. Now, it is up to us to see that his statue is placed in Washington where it should be. With the 1400 paid up members of the Medical Association of Georgia I think we can give \$5.00 apiece, or \$10.00, if necessary.

The motion of Dr. Thrash was put to a vote and carried.

DR. CHARLES A. GREER, Oglethorpe, Chairman, presented the report of the Committee on Necrology, as follows:

REPORT OF THE COMMITTEE ON NECROLOGY.

While we have frequently in the past been called upon to note the demise of many of our associates, it seems hardly possible that it becomes our duty to report the death of so many of our brightest and most useful members, whom death has claimed since our last annual meeting of the Medical Association of Georgia.

With sad hearts and bowed heads we present the following names, to be transferred from the roll of active membership to "in Memoriam," to-wit:

Dr. St. John B. Graham, Atlanta, Georgia, died May 2, 1922, aged 57.

Dr. Benjamin S. Burton, Valdosta, Georgia, died May 7, 1922, aged 55.

Dr. Henry F. Scott, Atlanta, Georgia, died May 17, 1923, aged 69, suddenly of heart trouble.

Dr. James W. Mills, Atlanta Georgia died June 2, 1922, aged 89.

Dr. L. S. Young, Moreland, Georgia, died June 9, 1922, aged 83, from senility.

Dr. Jesse C. Asberry, Greensboro, Georgia, died July 3, 1922, aged 57.

Dr. John I. Lane, Brooklet, Georgia, died July 10, 1922, aged 73.

Dr. D. A. Haney, Newnan, Georgia, died July 25, 1922, of an acute attack of Bright's disease, aged 40.

Dr. Augustus Milton Anderson, Atlanta, Georgia, died August 9, 1922.

Dr. William W. Power, Buford, Georgia, died August 22, 1922, from carcinoma, aged 75.

Dr. Jesse T. Holbrook, Bold Springs, Georgia, died August 7, 1922, aged 77.

Dr. Lee Benjamin Clark, Atlanta, Georgia, died August 23, 1922, following a stroke of apoplexy, aged 54.

Dr. Albert S. Gilbert, Florence, Georgia, died September 16, 1922, aged 57, following an operation for appendicitis.

Dr. Percy T. Hickson, Tallulah Falls, Georgia, died September 14, 1923, aged 69.

Dr. Robert D. Jones, Summerville, Georgia, died September 8, 1922, aged 68.

Dr. Walter Carl Troutman, Tennville, Georgia, died September 26, 1922, aged 37, suddenly from acute indigestion.

Dr. Ira N. Bishop, Brunswick, Georgia, died September 22, 1922, aged 70.

Dr. J. W. Glenn, Conyers, Georgia, died September 20, 1922, from carcinoma, aged 90.

Dr. J. R. Henderson Sandersville, Georgia, died September 29, 1922, from cerebral hemorrhage, aged 65.

Dr. Andrew Jackson Deas, Atlanta, Georgia, died October 30, 1922, following operation, aged 59.

Dr. R. C. Carr, Foster Mills, Georgia, died October 17, 1922, from cerebral hemorrhage, aged 80.

Dr. E. B. Weldon, Inman, Georgia, died October 14, 1922, from senility, aged 79.

Dr. John Osburn Teasley, Lilly, Georgia, died October 28, 1922, aged 43.

Dr. Thomas Jefferson Johns, Tallapoosa, Georgia, died October 14, 1922, suddenly at his home, aged 69.

Dr. Leslie E. Thompson, Woodcliff, Georgia, died October 1, 1922, from pulmonary tuberculosis, aged 38.

Dr. Asa L. Payne, Danielsville, Georgia, died October 9, 1922, aged 56.

Dr. Everett James Stothart, Savannah, Georgia, died October 8, 1922, from paralysis, aged 31.

Dr. Ebenezer T. Gilmore, Ivey, Georgia, died October 10, 1922, aged 80.

Dr. Jos. Augustus Guinn, Conyers, Georgia, died October 3, 1922, aged 56.

Dr. Clark A. Acridge, Savannah, Georgia, died November 7, 1922, aged 31.

Dr. Charles P. Brightwell, Maxeys, Georgia, died December 25, 1922, from influenza, aged 47.

Dr. Andrew J. Caneder, Murrayville, Georgia, died December 27, 1922, from cerebral hemorrhage, aged 63.

Dr. Arthur B. Prince, Kingsland, Georgia, died December 25, 1922, aged 34.

Dr. L. M. Jones, Milledgeville, Georgia, died December 7, 1922, following an attack of erysipelas, aged 72.

Dr. R. B. Ridley, Sr., Atlanta, Georgia, died January 23, 1923, after an illness of a few days, of pneumonia, aged 80.

Dr. Henry Lattimer Rudolph, Gainesville, Georgia, died January 30, 1923, of pneumonia, aged 43.

Dr. Andrew Brown, Sparta, Georgia, died January 6, 1923, from pneumonia following influenza, aged 36.

Dr. W. H. Crowe, Pavo, Georgia, died February 4, 1923, from an automobile accident, aged 52.

Dr. Daniel DuPree, Athens, Georgia, died February 22, 1923, of angina pectoris, aged 40.

Dr. Paul Tudor Jones, Columbus, Georgia, died February 9, 1923, aged 71.

Dr. Thomas Hartley Hall, Dublin, Georgia, died February 12, 1923, from senility, aged 85.

Dr. Thomas J. Kennedy, Coolidge, Georgia, died February 8, 1923, from heart disease, aged 60.

Dr. L. P. Eberhardt, Elberton, Georgia, died March 24, 1923, aged 54.

Dr. S. W. Farris, Lafayette, Georgia, died March 12, 1923, aged 68.

Dr. B. L. Embry, Villa Rica, Georgia, died April 20, 1923, aged 70.

Dr. John P. Cook, Colquitt, Georgia, died October 9, 1922, from peritonitis, aged 56.

Dr. Charles E. Whitefield, Woodstock, Georgia (summer of 1922), from chronic interstitial nephritis.

Dr. Julian Augustus Ward, Quitman, died April 6, 1922, from pneumonia, aged 46.

Dr. William P. Gaffney, LaGrange, Georgia, died April 9, 1922, from abscess of the lungs, aged 64.

Dr. William E. Adams, Madison, Georgia, died April 11, 1922, from nephritis and complications, aged 51.

Dr. Needham Lawton Kirkland, Savannah, Georgia, died April 14, 1922, from septicemia, resulting from abscess on his leg, aged 62.

Dr. Robert I. Fox, Brunswick, Georgia, died suddenly April 27, 1922, aged 48.

Dr. Edmund Franklin Saxon, Winder, Georgia, died May 1, 1922, from cerebral hemorrhage, aged 44.

Dr. John Smiele Turner, Monticello, Georgia, died June 6, 1922, from chronic nephritis, aged 42.

Dr. Julian J. Stone, Hawkinsville, Georgia, died September 1, 1922, from tuberculosis, aged 49.

Dr. Walter B. Mott, Mount Mourne, Georgia, died October 23, 1922, from senility, aged 87.

Dr. John H. Hockenull, Cumming, Georgia, died November 19, 1922, aged 59.

Dr. Patrick Clabon Nunn, Davisboro, Georgia, died December 14, 1922, from acute indigestion, aged 60.

Dr. Robert Lee DeLoach, Decatur, Georgia, died December 24, 1922, aged 53.

Dr. Marcus U. Nix, Atlanta, Georgia, died February 1, 1923, of heart disease, aged 66.

THE PRESIDENT: What will you do with the report on Necrology.

DR. J. W. PALMER: I move the report be adopted as presented.

Seconded and carried.

DR. HARDMAN: I understand that the paper I submitted yesterday on Industrial Medicine and Surgery was referred to the House of Delegates. I wish to know what is to be done with it and what is the best course to pursue in the matter. I know that bills introduced into the legislature are frequently pigeon-holed. If this should come before a committee it may not be adequately considered. I sincerely hope it will meet with the approval of the House of Delegates. I have been asked some questions in regard to how it can be made operative, and I shall be very glad to make a statement as to how this can be made operative and how it is being carried on in other organizations in our country in other states.

DR. THRASH: It seems to me, that the proper disposition to make of this would be to refer it to our Legislative Committee. Dr. Hardman can co-operate with the Legislative Committee in an advisory way in obtaining the object he desires.

DR. HARDMAN: In answer to Dr. Thrash, I will say that this is not a legislative matter except what is enacted by this House of Delegates. This body is the authority and it does not need to go to the legislature in any sense.

DR. THRASH: We can endorse this movement and name the committee, commission, or department, whatever the House of Delegates sees fit to do. It can be referred to Dr. Toepel's committee.

DR. HARDMAN: We have had it before the general meeting. My desire is to complete this organization, and the House of Delegates can name it a committee, commission, or department of the Medical Association of Georgia just as this body may determine, and we can appoint or name a certain number, either one from each district or so many as may be determined by you to constitute this commission or committee, so that they may proceed at once with the work, the outline of which I want to give shortly. That is what has been done by some of the organizations in other states. This committee, commission, or department should co-operate with similar organizations connected with the American Medical Association and with other associations in other states. That is the purpose. If that meets with your approval, I can give you more definitely the real work and scope of this committee or commission. This commission should have a secretary, who shall keep in touch with the American Medical Association and the organizations in other states. The Secretary of this committee would naturally be an active man.

Dr. Hardman then read from sections of his paper outlining the scope of the work to introduce into the industrial establishments of Georgia the best methods possible so as to give Georgia the best opportunity, it matters not whether these industrial establishments be cotton mills, foundries, or dairies.

I would therefore move that the House of Delegates appoint and name a department in this Association which shall be known as the Industrial Medicine and Surgical Commission, or committee, for the purpose and scope as outlined in my paper. Seconded.

DR. THRASH: We have such a committee already. Dr. Toepel's committee acts in every county and we ought to coordinate our health work as much as possible.

I would move to amend that we refer this matter to the Committee of which Dr. Toepel is Chairman, with power to act, and this

Committee can appoint whatever separate committees are necessary. It seems to me, we are getting top heavy with committees, and we should put this responsibility on one man. I offer this as a substitute for Dr. Hardman's motion.

Seconded.

DR. CLARK: Dr. Hardman will have to change his motion or rescind the motion that was made several years ago. In 1908 some of you may remember the matter was referred to the different county societies by action of the House of Delegates as to whether there should be a division or a department, and it was almost unanimously against any department. That rule still stands, and it will be necessary to rescind that ruling.

DR. HARDMAN: I stated a department, commission, or committee. I did that in order to meet these ideas. I will gladly withdraw the word department and ask that a committee be appointed.

In regard to the remarks of Dr. Thrash, there is no one who has a higher regard for service and ability than I have for the distinguished head of the Public Health Department of this Association, but at the same time, I believe we have reached the point when industrial lines should be recognized, and I believe that it ought to be done now because Georgia needs it now. If you will think of how we are lagging in our industrial development as compared with Virginia, North Carolina and Alabama, you will realize the need of such action by this body. I believe we ought to recognize this and it is going to mean something to us. If it is not recognized and carried out, somebody else will do it, and I do not want it to be done by some outside association.

I am opposed to having it referred to that committee when we can have a secretary who will keep in touch with organizations and get in touch with the national government.

After this paper was read and passed yesterday evening, one man came to me and said that by reason of the method you have suggested and the organization locally we have been able to increase the products in our mill 100 per cent. per spindle. That means something. What does that mean to

Georgia? Go into North Carolina and see what is being done there, as well as what is being done in Alabama and Virginia. Why is it these organizations have shown the people of the state that they help the producer, they help the manufacturer. I stand for that kind of development in Georgia and I do not want to side track any other movement. I want to maintain the name because industrial development covers a great scope that needs to be covered in Georgia today.

The name of that committee shall be the Committee on Industrial Medicine and Surgery.

DR. TOEPEL: For the information of Dr. Thrash, I will say that there is an American Association closely affiliated with the American Medical Association. They meet annually as a separate department of the American Medical Association. They are industrial physicians.

DR. GEORGE L. ECHOLS: The institution I represent is at great expense; the second great expense is public school system, and a third great expense is your sanitarium. We are up against it for taxes. Some sort of industrial psychiatry has been before our minds in Milledgeville. We are anxious to approach the leaders of industries and tell them that it is to their interest to look after the mental condition of their employees just as much as it is to remove a cinder from the eye or to look after tuberculosis of the lungs. Above all, we should look after the most important part of the human machinery, the mind. If we had such a committee and had it represented from a psychiatric point of view, we could accomplish a whole lot of good.

DR. THRASH: I will withdraw my amendment.

DR. GIBBS: I would like to ask whether there will be any expense attached to Dr. Hardman's committee, and if so, where is the money to come from to carry on the work?

DR. HARDMAN: Some of these organizations I have alluded to have been able to secure a man who devotes his whole time to the work, but we cannot do that. The

industrial organizations pay their own expenses and some of them have secured men who are willing to devote their entire time to the work. It will not cost the Medical Association of Georgia anything.

The motion of Dr. Hardman was put to a vote and carried.

DR. M. M. HEAD: I move that we reconsider the resolution passed yesterday in regard to the appointment of a committee to investigate the present status of endocrinology.

THE PRESIDENT: Did you vote for it?

DR. HEAD: Yes, I voted for it?

DR. THRASH: I did not vote for it, and the reason I agree with Dr. Head is that we are getting top heavy with commissions, and if this committee or commission goes through, I will want a commission on varicocele. (Laughter.) The whole purpose of the thing was founded on giving a little publicity to some doctor. That is putting it strongly, but that is the real situation, and I am talking straight from the shoulder. Such a commission would be of no value. You can read everything that is known about endocrinology in five pages. There are not ten men in this audience who can tell you anything definite about endocrinology. The American Medical Association has passed it up with a few words, and we know very little about it, and therefore, we do not need any endocrine commission.

DR. LYLE: As I introduced this resolution before a meeting of the Council, I hope I may be permitted to say a word in regard to it.

I agree with Dr. Thrash thoroughly, that there is not much to it. That is the reason I asked that a commission be appointed so that the medical profession of the State of Georgia would realize that there is not much to it considering the number of questions I have been asked. I am not interested in any sense in endocrinology, but practitioners are interested in it. It is a new thing, and the idea among the country doctors is that it is almost a cure-all, and they have been influenced by smooth detail men who tell them what this preparation will

do and what that one will do, and they say some of the pluriglandular extracts can be used by the stomach and some intravenously. It is a matter of protection of the doctor to prevent him from being mulcted, so to speak, to the use of unnecessary, worthless, useless drugs, and the public are required to pay for a lot of stuff which in my opinion is worthless. The only way to be able to influence the doctors throughout the State of Georgia is through a commission appointed of men in the state who are in a position to investigate and determine without prejudice whether or not these preparations are of value, and if so, which ones are of value, and let it be known. Personally, I am not interested in the matter at all. It is not in my line of work, and I will willingly withdraw my request to have this commission appointed. I felt, however, the profession of the state was entitled to know the results of such an investigation which I and others are not in a position to ascertain. I might go still further and say it was not only a proposition from the standpoint of protection of the doctors, and from the standpoint of protection of the public, but in my opinion there is a great deal of danger as a result of the reckless use of these preparations. The average doctor does not know which particular endocrine is used, and he is using shotgun prescriptions recklessly, uselessly, and wastefully. I will willingly withdraw the resolution, but I do not think Dr. Thrash is exactly fair in stating that he wants a commission on varicocele and other pathologic conditions. They are old and well established disorders, and the public know something about them, and the profession are informed in regard to them, but endocrinology is a new thing, and only in the last year or so has any general interest been manifested in it. Some members of the profession seem to have gone wild over the thing.

I will ask that I may be permitted to withdraw the resolution.

DR. WAGNON: Reference has been made to the country doctor. Yesterday,

when Dr. Lyle was explaining this matter and talking about the doctors of the country, something was said about what the average doctor did not know about endocrines. I may tell you that one doctor knows as much as another about the endocrines. If a doctor lives in Savannah, he has got the same chance to know as much about the endocrines as any other. If you are going to have a commission, it ought to come from a scientific body and let them investigate and find out for themselves. It is a question for each individual doctor to determine.

The motion to reconsider was put to a vote and carried.

Dr. Lyle then withdrew his resolution after explaining his position in the matter, and as there were no objection, the resolution was considered withdrawn.

The Secretary presented the following resolution, which was introduced by Dr. C. W. Roberts, of Atlanta:

WHEREAS, the Medical Association of Georgia, in regular session assembled, Savannah, May 2nd to 4th inclusive, recognizes the great value to the state which is to result from activities of the newly organized Association, which has for its purpose the intensive development of various industries in the State of Georgia, projected under the title

GEORGIANS, INCORPORATED

and appreciating that while as physicians, we are not directly associated or interested in the development of industries in the State of Georgia, that the attraction to Georgia of new enterprises, and the encouragement of those which we now have, will make for the prosperity and happiness of all its people in whatsoever avocation engaged, be it

RESOLVED, That this Association go on record as heartily endorsing the purpose of Georgians, Incorporated, and that the Association officially, and its individual members, lend their hearty co-operation to the successful prosecution of the movement: be it further

RESOLVED, That a copy of this resolution be mailed to Hon. H. M. Stanley, Commissioner of Commerce and Labor, State

Capitol, Atlanta, Georgia, the President and Active Director of Georgians, Incorporated.

THE PRESIDENT: What will you do with these resolutions?

DR. J. W. PALMER: I move that we accept them as information and they be referred to the Industrial Commission. Seconded.

DR. HARDMAN: The subject matter of these resolutions has been covered in my report, and I would move to amend that we communicate to Henry M. Stanley, the steps taken in reference to the Committee on Industrial Medicine and Surgery.

The amendment was seconded, accepted, and the original motion as amended was carried.

Under the head of "new business," Dr. R. H. Wicker, Rome, offered the following resolution:

WHEREAS, The use of narcotics has become so alarming and persistent that be it

RESOLVED, That it is the sense of this body that we request the Congressmen and Senators of the United States that they take steps to establish regional hospitals for the detention, care and cure of narcotic addicts.

DR. MULHERIN: I move the resolution be referred to the Committee on Public Policy and Legislation. Seconded.

DR. LYLE: If the resolution is left in the position in which it is in now, I am not quite sure but what it would put us on record as encouraging state medicine, and I would strongly favor the adoption of such a resolution if it applies to the indigent, but I hardly feel it is exactly the right thing to take addicts who may be able to pay for treatment. We might be getting into state medicine by so doing, to which we are opposed.

DR. ELROD: This narcotic law has been in force long enough to be dead. Carried.

DR. BOLAND offered the following amendment to Article VII of the Constitution to read: The annual meetings shall take place on the second Wednesday in May and at such place as shall be designated by the Association. (To lie over until next year.)

Dr. Hardman asked for the appointment

of the Committee on Industrial Medicine and Surgery, preferable a member from each Congressional District.

Dr. J. W. Palmer moved that this committee, to be appointed by the President, to be composed of one member from each Congressional District.

Seconded and carried.

The President announced as the members of the Committee on Industrial Medicine and Surgery the following:

Dr. H. W. Hesse. First District.

Dr. Tom. Chason. Second District.

Dr. T. J. McArthur. Third District.

Dr. Hugh McCullough. Fourth District.

Dr. C. W. Roberts. Fifth District.

Dr. J. O. Elrod. Sixth District.

Dr. R. M. Harbin. Seventh District.

Dr. P. R. Stovall. Eighth District.

Dr. L. G. Hardman. Ninth Dis. Chairman.

Dr. George L. Echols. Tenth District.

Dr. A. Griffin. Eleventh District.

Dr. T. C. Thompson. Twelveth District.

On motion, the House of Delegates adjourned until Friday, May 4, at 3 P. M.

FRIDAY, MAY 4, 1923—FOURTH MEETING

The House of Delegates met at 3 P. M. and was called to order by Dr. V. O. Harvard.

DR. STEWART R. ROBERTS: Some years ago the Legislature of the State of Georgia elected two men to represent us in the Hall of Fame—Crawford W. Long and Alexander H. Stevens. It is estimated it will take \$10,000.00 to put this project into effect. Dr. Boland, Dr. Bunce and many others have been working at it. It seems to me, it is up to us to put this thing over and erect a statue to Crawford W. Long. Here is the first man who ever gave an anesthetic, a country doctor in Georgia. He has already two monuments erected to his memory in Georgia, one erected at Jeffersonville, and one at Athens. We are \$250.00 short, and we do not want to go back without that money. Let this great country do all it can to put a statue in Washington to Crawford W. Long. The panic is over; the boll-weevil has lessened its activities,

and cotton is near thirty cents. We can afford to be rich in spirit and be generous in pocket.

I move, Mr. Chairman, that it is the sense of this body here assembled that the Council appropriate not less than \$250.00 toward the Crawford W. Long Memorial from the treasury of this Association.

Seconded and carried.

After a fervent appeal by Dr. Stewart R. Roberts, to the Association, the members contributed \$250.00 more in cash.

Adjourned.

PROCEEDINGS OF THE MEETING OF THE SECRETARIES OF DISTRICT AND COUNTY SOCIETIES HELD WEDNESDAY EVENING, MAY 2, 1923, IMMEDIATELY AFTER THE SCIENTIFIC SESSION

The meeting was called to order by Dr. Allen H. Bunce, the Secretary-Treasurer, who said: At the last meeting of the Association, as you know, an effort was made to organize the Secretaries of the county and district societies for the purpose of devoting some time at each annual session to the work of organization in the Association. You perfected a preliminary organization, and at Columbus last year we had 30 men all of whom attended the first meeting and offered good suggestions. Unfortunately at this meeting there are none of the officers elected last year present.

Now, I think this organization is too good a thing to let it drop entirely, and my object is to ask you to elect officers for the new year, so that at the next annual meeting you may have present the secretaries of the different societies and be able to carry on the work which has been started so well. Therefore, I am going to call this meeting to order and entertain nominations for officers for next year.

DR. J. L. CAMPBELL: There is one feature that interferes with your organization. The men who attend the various county societies may not be secretaries next year. Is there any way to continue this

organization by electing a President and Secretary so that the organization can functionate at the next meeting. Can a plan be devised by which that can be done. This is one of the most important organizations for medicine in the State of Georgia, and if there is some way to carry this organization from one year to another it would be profitable. At this moment I cannot say how it should be done. Most of the secretaries are elected for three years.

The following officers were nominated and declared duly elected: President, Dr. Grady Edward Clay, Atlanta; Vice-President, Dr. E. Carson Demmond, Savannah; Secretary, Dr. A. J. Green, Union City.

Dr. Clay then took the chair. He said: The secretaries play an important part in this organization because in organizing local county societies the work falls upon the secretary of the particular society. I think there should be such an organization, and I believe it should play a great part in the Medical Association of Georgia. The meeting last year was well attended and a great many helpful suggestions were made at the time.

DR GREEN: We have in our county society nine doctors, seven of whom are members and two are not. We have meetings once a month and we plan to do some work. We operate a clinic. We examine all school children and do some tonsil and dental work. We try to have other societies cooperate with us. We do some charity work as well as charity work among school children. We are close enough to Atlanta to invite men to come and talk to us, and in this way we hope to keep the society going pretty well.

DR. THEODORE TOEPEL: This report I have here was gotten up by the committee on Health and Public Instruction, was adopted by the House of Delegates, and it now becomes a law. It is a little different same time working in cooperation with the Board of Health. Dr. Toepel then read the new act.

DR. J. L. CAMPBELL: I am going to ask your indulgence to talk to you about the question of cancer control. I have been talking about it for the last four or five

years that is since 1918. When the society met here last we created a Cancer Commission and I am anxious to appear before this body with the request that the secretaries encourage the councils of the societies to hold special meetings on the subject of cancer control.

We have the American Society for the Control of Cancer, and this movement is fairly well organized in the State of Georgia. We have a permanent chairman appointed for each district, and that chairman is nominated in all, except two districts, as county chairman, so that gives us an organization practically complete throughout the state, and much depends on the enthusiasm with which this county chairman and district chairman take hold of the matter as to whether we have an active organization or an inactive organization, and the county medical society can encourage this more than any other one organization throughout the state. The American Society for the Control of Cancer is anxious to keep the organization within the regular medical profession. As Dr. Toepel said, if we turn it over to women's clubs or to civic organizations—in many instances chiropractors, osteopaths, and even quacks belong to these organizations—they may be called upon to give the public information on subjects that will lead them astray, while the members of the regular profession in the county should give them the facts along the right lines. It is a very important subject because the State of Georgia is losing annually more citizens from cancer than they lost during the years of the World War. Only 1550 men died in the United States Army during the two years of war, and more than 1500 die each year from cancer in Georgia. I know you are anxious to do your duty, and we hope you will in the future cooperate with us, and that you will bring the subject before the medical men of the state and in turn bring it to the attention of the public.

I am going to ask the Medical Association of Georgia tomorrow to give us money with which to furnish each county society charts, lantern slides, etc. I have some charts which I paid for myself. They cost \$50.00 or

\$75.00. I can loan them to you if I get assurance of your returning them. I have \$200.00 or \$300.00 worth of lantern slides which I have made up myself. These lantern slides when sent from place to place are easily broken in transportation if great care is not used. I have a two reel film at home that belongs to the American Society for the Control of Cancer which can be loaned to county societies that can use a moving picture machine. This reel is worth one hundred and fifty or two hundred dollars, and it will have to be insured because the society is more or less responsible for it. I am at your service at any time to furnish you with these things. Dr. Bunce suggests that the district chairman bring this matter to the attention of the public. If the county societies will cooperate with us I am sure a great deal of good can be done.

THE CHAIRMAN: We should bring this to the attention of our different local societies.

DR. TOEPEL: Dr. Campbell misunderstood me. The chiropractors are not people that are members of these lay associations, and by our activity we can prevent chiropractors from giving lectures on cancer.

THE CHAIRMAN: We have with us Dr. Pruitt who, I am sure, can tell the secretaries a few things of interest.

DR. PRUITT: I am personally interested in reports and in other matter that come to the State Secretary's office from the secretaries of the county societies. I want to call your attention to something that happened this afternoon. Three men handed in papers which were read before this body at the afternoon session; two of the papers did not have any name or address on them. One other thing I want to impress upon you is that in sending in reports you should send in the names of the men who make the reports with their correct initials and their addresses. Again, if you know any man who is not receiving the State Journal the Secretary and I would appreciate it very much if you would communicate that fact in writing. If I get a written notice it will get to the right place and will receive proper attention, and the change will be made. The

man will receive his Journal. This will not only relieve you of worry of being told he is not receiving his Journal, but it will convince this man that we are rendering him service.

Another thing: I would like the secretaries of the societies to notify me of the change of address of any member in their county society. If a man moves from one place to another, the Journal appreciates having this as a news item. However, this is secondary, because the most important reason for receiving a notice of change of address is that the doctor will receive the Journal at the new place just as he did before his removal. Many members do not send in this information. Secretaries can do this. Births, deaths, and anything else pertaining to your local society should be sent to us for publication in the Journal. If the Journal can get hold of these things in written form they will make news items. At the present time we only have two channels through which to collect news items for our State Journal, one from the clipping bureau, to which we are subscribers, and the other through members of the State Association. We are largely dependent on you to furnish us the kind of news items which we would like for publication in the State Journal.

We have not received any abstracts of papers or book reviews other than from men who have been requested to send them in. I would like to see more men, in some of the smaller places, send in their abstracts of cases and things like that. We want to help you so that you may get results in your county societies and make the county societies just as good as they possible can be.

DR. J. H. HAMMOND: While we are talking on the subject of societies I might say a few words. I began this work when I was a young man, and I rather suspect that I have had more experience as a county society secretary than any one here. My county has been reorganized after the plan of the American Medical Association. We have organized and reorganized a good many times before we finally obtained a

charter from the State Association. Since that time we have been continuously organized and almost completely so. At the present time we have two men in my county who are not members. One of them has been a member. Dr. Bunce I suspect is more or less familiar with his name. Although he is eligible legally, he is not desirable, and if he came in other men ought to be in who have sometimes been with us. We have one other man in the county who takes but little interest in practice and for that reason he is not with us. I think there are only two men eligible in my county society who are not members at this time. We do not meet very often. I want to say this, I am satisfied that the success of our State Association depends more on the county secretaries than it does on any other one thing. We need a good man for president and a good man for secretary, but the president and secretary can do very little for the State Association without the help of the county secretary. These secretaries are making a success of their work without much help from the higher officials. I am convinced of that because of the fact that I have been working in my county for forty years. Some of our men do not usually take much interest in attending the State Association. I try to get them to come, but they do not do it. A long experience has convinced me of the fact that most of our county secretaries are willing to do the work assigned to them, and if they will do the work they will help materially in building up the Association. They help both the President and Secretary of the State Association to carry on their work more successfully.

DR. E. CARSON DEMMOND: I regret there are not more secretaries at this conference. I feel that the secretary has the biggest burden to carry of any man in the local society. I would like to discuss some of the problems that come up in connection with the office of the secretary, and if we had time to do so we could doubtless get a great difference of opinion. One thing that worries me is that we have a program committee so-called which does not function. It is up to the secretary to arrange the pro-

gram and make it as attractive as possible if he would get a good attendance. It is hard to induce men to read papers. We encourage them to do so, but they hesitate to prepare them. We have passed motions to invite some man from another city to come here and address the members at our expense. We are fairly well organized; we have 79 members, 5 members from some of the smaller towns, and some outside of the county. They come down once in a while and attend our meetings. We meet twice a month, the second and fourth Tuesdays. We have had a better attendance this year than last year. Our average attendance last year was 25, and considering that the membership is 79 it is not a good average. But this year we are going to adopt the plan of forming teams by which we appoint some eight or ten men and assign them certain subjects preceding the meeting. We believe that will work very well and insure a better attendance. I hope the organization will prosper and that we can get a better crowd together and discuss problems peculiar to all secretaries.

A Personal Experience With Sprue

S. M. Lambert, New York (Journal A. M. A., June 30, 1923), describes his experience with sprue, emphasizing especially the value of the hydrochloric acid-pancreatin treatment first advocated by T. R. Brown in 1916. Lambert took 15 minims (1 c.c.) of 0.2 per cent hydrochloric acid before, and 10 grains of pancreatin after each meal without dietary precaution. This treatment has spread into general use along the Queensland coast, and was found quite satisfactory in the treatment of many early cases. Lambert thinks it merits more general attention than it has attracted.

Financial Statement

Balance in Citizens & Southern Bank, Atlanta, May 1, 1922	\$ 4,687.10
Total receipt from all sources, May 1, 1922, to May 1, 1923	11,242.77
Total to be accounted for	15,929.87
Balance in Citizens & Southern Bank, Atlanta, May 1, 1923	6,990.50
Total expenditures, May 1, 1922 to May 1, 1923 as per vouchers attached	8,838.37
Total accounted for	15,929.87

VOUCHERS

Description

No.	Amount	
133—Kendrick & Williams, Inc. Programs and envelopes	\$ 94.00	
134—Willie Lee Moon Special letters	5.45	
135—St. Louis Button Co. Buttons, ribbons, insurance, postage .	27.30	
136—D. L. Auld Co. Buttons for ex-President of Association	61.43	
137—W. E. McCurry, M.D. Railroad & Pullman fares, while in official capacity for Medical Association of Georgia	27.28	
138—Bunt Hood Co. Banners and cards	20.60	
139—Allen H. Bunce, M. D. Salary for May, 1922	150.00	
140—Allen H. Bunce, M.D. Stenographer, bookkeeper, office space, clerical work, etc.	75.00	
141—Geo. C. Rogers, Acting Postmaster Postage	20.00	
142—W. E. McCurry, M.D. Expense as Delegate to A.M.A. Meeting May 1922	100.00	
143—W. C. Lyle, M.D. Expense as Delegate to A.M.A. Meeting, May 1922	100.00	
144—J. O. Elrod, M.D. Expense as Councillor for one year, July 1921 to May 1922	42.28	
145—Kendrick & Williams, Inc. Printing May issue of Journal	308.80	
146—M. M. McCord, M.D. Expense as Councillor, April 14-18, 1922	3.10	
147—Massachusetts Bonding & Insurance Co. Premium on Bond for Dr. Allen H. Bunce, Sec'y-Treas.	7.50	
148—Marion C. Pruitt, M.D. Expense arranging exhibition space at Columbus	10.00	
149—Miss Mary Robinson For four days reporting, railroad & Pullman fares, incidentals and meals	92.85	
150—Lester Book & Stationery Co. Clips and paste	1.70	
Debit ticket-Check on Bank of Commerce, Summerville, Ga., by J. P. W..	40.00	
151—Allen H. Bunce, M.D. Salary for June	150.00	
152—Allen H. Bunce, M.D. Stenographer, bookkeeper, office space clerical work, etc., for June	75.00	
153—Mrs. F. W. Goodroe Sixty-four hours work	35.50	
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		Debit ticket—The Citizens Bank, McRae, Ga., Telfair County Secre- tary's check returned	5.00
		Total Expenditures	\$8,939.37

THE DISAPPOINTMENTS OF HEXAMETHYLENAMIN.

Hexamethylenamin, first introduced under various proprietary names, has at length joined the large and growing group of drugs of which much has been expected and still more promised in a therapeutic way, but which have failed to justify the hopes of their champions. It cannot be said that too little time has elapsed to permit a correct evaluation of the claims for hexamethylenamin, since a quarter of a century or more has intervened since the earliest announcement of its possible therapeutic significance. The drug owes its action entirely to the liberation of the antiseptic formaldehyd, a reaction now known to occur only in acid solutions. Hexamethylenamin itself is not actively antiseptic. The use to which it is still devoted with apparent scientific justification is in preventing the growth of micro-organisms in the urinary tract, and in destroying them when they are present in the urine during infectious diseases, such as typhoid fever. The drug is recommended as an antiseptic in cystitis, and as a prophylactic prior to operations on the urinary tract. In any event, its possible efficacy depends on the elimination of the drug through the kidneys with a urine that remains distinctly acid in reaction; otherwise, no benefit is to be expected. Such acidity may often be insured by simultaneous administration of substances like acid phosphates, which promote the secretion of an acid urine.

As has been shown that antiseptic effects cannot occur in the body tissues and fluids that have a neutral or slightly alkaline reaction, (1) the hope that hexamethylenamin might function to destroy dangerous germs within the tissues themselves has been shattered. Contrary to what was at one time proposed, it has no material antiseptic value in the cerebrospinal fluid

during spinal meningitis. Hexamethylenamin has been recommended as a solvent for uric acid, and has met the fate of most of its competitors for favor in the attempted execution of an almost impossible task.

And now it has been shorn of another reputed property, that of diuretic potency, by the studies of Ruh and Hanzlik. (2) These involved careful measurements of intake and output of fluid, not mere bedside guesses. Hexamethylenamin, whether used in small or in larger doses, is not a diuretic. The duration of the excretion of hexamethylenamin in the urine ranged from twenty-four to forty-one hours, being somewhat longer with larger doses used, but independent of fluid intake and diuresis. This, too, is contrary to current conceptions.

To complete the story of failure, it may be added that hexamethylenamin is said to be liable to produce renal irritation when the dosage is unduly large or its use protracted. The trade names under which the drug has been widely advertised are numerous. Various compounds of the substance also have been added in recent years to the list to be exploited. They simply possess the actions of hexamethylenamin and the salts of the acid with which it may be combined. (3) The long story of this drug, lauded alike legitimately and fraudulently, filled with promise by the facile pen of advertising writers, and stripped of much of this vaunted glory by the tests of critical investigators, should be a wholesome lesson to those in whom great expectations are easily awakened. It is a lesson often repeated in the history of therapeutics—and the drug business.—*Jour. A. M. A.*, Jan. 6, 1923.

1. Hanzlik, P. J., and Collins, R. J.: Hexamethylenamin, *Arch. Int. Med.* 12:578, Nov., 1913. Hanzlik, P. J.: The Liberation of Formaldehyd from Hexamethylenamin in Pathologic Fluids, *J. A. M. A.* 72:295, Jan. 24, 1914.

2. Ruh, H. O., and Hanzlik, P. J.: Hexamethylenamin as a Diuretic, *J. A. M. A.* 79:1980, Dec. 8, 1922.

3. Hexamethylenamine and Hexamethylenamine Compounds, New and Nonofficial Remedies, 1922, p. 131.

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ORIGINAL ARTICLES

THE FOUR NIGHTMARES OF THE ABDOMINAL SURGEON*

E. C. Davis, A.B., M.D., F.A.C.S.

Atlanta, Ga.

In all of life's experiences there are difficulties and apparent obstacles that stand in the way of easy success, but in very few are there such outstanding ones as appear in the daily experience of the abdominal surgeon, nor are there any more fraught with possibilities of dire results. The hazardous routes over which we must travel have many serious possibilities. In fact, these are often too numerous to mention; but if all of life's voyages were smooth, and all operations simple, there would be no need of skilled navigators or experienced surgeons. Unhappily, such is not the case, and we must still spend years of time in observation and study, in endeavoring to qualify ourselves for the most responsible positions which we hope to occupy.

I have taken the liberty of dividing the most outstanding of these risks into four broad divisions, viz.: (1) Hemorrhage; (2) Infection; (3) Intestinal Obstruction; (4) Acute Dilatation of the Stomach with Hepatic Toxemia.

We are at a loss to estimate which of these is most potent of all results, but wish to consider them in the order of their speediest occurrence:

Hemorrhage

To obviate this we should, if possible, begin the consideration of the patient from birth, or even before, as who can always foretell the existence of hemophilia unless

the antecedent history is carefully compiled. Who can tell the possibilities of blood coagulability unless the patient is carefully examined and the blood studied from its various angles? Who can forecast the possibilities of blood vessel contractility unless due attention is given to the patient's general condition?

All these are important, but there comes a purely mechanical consideration during the performance of the operation that must not be lost sight of, to wit: The conservatism of all the blood possible during the performance of the operation, and a gentleness in the handling of tissues, especially blood vessels, that they may not later give way and cause serious losses of blood.

The average patient can not afford to lose from more than a pint to a quart of blood without being subjected to very severe shock and often fatal results. One should, therefore, catch and tie all bleeding vessels promptly, and in ligating should never fail to leave ample stump after tying, for we all know that the ligated tissue soon begins to swell, and if the stump be short the ligature may readily be forced off and the mouth of the blood vessel left open to bleed, with disastrous results.

Sometimes the desire to be in too great haste may conduce to such possibilities, and for that reason haste has no place in efficient surgery. Do not misunderstand me to mean that one may not operate speedily, as rapid operating with thoroughness, and not haste or recklessness, is greatly to be desired, but accuracy and thoroughness must never be sacrificed for speed or haste. Again, undue or needless trauma of blood vessels may lead to necrosis later, and thereby produce a delayed or what may be called a secondary hemorrhage.

*Read before the Medical Association of Georgia, Savannah, Ga., May 2-4, 1923.

Books have been written on hemorrhage, but we may briefly state that if we will conserve the blood supply at the time of operating, handle the tissues gently, ligate the vessels carefully, we may greatly diminish this annoying source of anxiety.

Infection

Improved technique has caused a great surcease in our relations to this vexatious possibility, but even with all the advancement in this direction and with our efforts to attain perfection in asepsis even then occasionally a break occurs. It is useless to enumerate the multiplicity of instrumentalities that may conduce to this complication. The modern operating room, if presided over by an efficient force, should prove a sufficient protection against this possibility. Occasionally a slight laxity or break occurs in the very best forces, and a reign of infection ensues, until this error is traced and corrected. Ligature material, especially catgut, has had to bear the sins of careless surgeons for many years, either in the failure to properly render their hands sterile, or in contaminating them before beginning their operative work, these factors caused them to condemn an innocent vehicle for their own faults; not that some catgut may not be faulty, but if prepared by any of the improved methods, should certainly be safe.

All surgeons experience a feeling of security in entering the operating room of today, but there come contaminations in the handling of pathological tissues, or the spilling of purulent material, which may tend to spread widely a previously isolated focus of infection. In the solution of the continuity of the intestinal tract, or in cutting off the appendix, it is so easy to allow some of the contents to escape, and these so often are reeking with organisms.

Each year now more care is being exercised in avoiding such possibilities of contamination and these infections, as a result are growing less and less frequent.

Infections no longer give us the serious concern that existed in the earlier days of aseptic development. In the days of so-called laudable pus when no wound was considered as safely healing unless there was

present a certain amount of so-called laudable pus. These were the days before the pathologist isolated the various organisms and before we understood the varying virulence of the different strains of organisms. In fact, there is much to learn about the virulence of certain strains of organisms, and also of certain organisms under different conditions and in certain tissues, as the varying resistance which certain individuals seem to develop to certain organisms. But this subject more strictly belongs within the domain of the pathologist, though it occasionally strikingly confronts the surgeon in his regular work.

Infections are too extensive in their ramifications to be considered in a brief paper like this. We must content ourselves with calling attention to the fact of their existence and impressing upon us the value of a clean surgeon, assistants and nurses with absolutely aseptic surroundings as an essential to minimizing this possibility.

Intestinal Obstruction

The types of obstruction occurring during acute inflammatory conditions, viz: Various types of ileus, those resulting from pressure due to the presence of tumors, and those due to rapidly forming adhesions interfering with the peristaltic wave, all have features of special interest, then those that follow operative procedures assuming this type of dynamic or toxic ileus, those in which adhesions form leading to early obstruction, and those in which the adhesions gradually encroach upon the lumen of the intestine, or retard the peristaltic wave.

These latter are the cases that develop weeks or months after operative measures have been necessary.

That which interests us most is how to avoid this disturbing complication.

1. When clean cases avoid infections.
2. In septic cases limit the area of infection.
3. Handle serous tissues with gentleness and use drainage only when absolutely necessary.
4. Avoid as nearly as possible gauze contact with intestinal surfaces, and if used

do not allow it to remain too long in contact with the intestines, nor pack too forcibly against such surfaces.

5. When intestines are greatly distended, do not fail to drain them by one of the approved methods of drainage, either rubber or glass tube, carefully inserted and sutured in place.

6. Thoroughly peritonealize as far as possible all raw surface before closing.

7. Carefully examine your patient before operating, if in doubt, examine blood completely, as well as the urine.

8. Accuracy of adjustment of tissues in reference to anatomical relations plays a very important part in avoiding this complication.

We could elaborate upon this to an almost limitless degree, but by attending to above mentioned conditions, we may reduce this to a minimum.

I should mention that when this condition does develop do not procrastinate in reopening and relieving, for each hour adds to the chances of a fatality. What may have been a simple condition at first becomes a hopeless problem.

Acute Dilatation of Stomach

I have written so much on this that embarrassment and hesitancy causes me only to mention the fact that the true cases of this kind resulting from those obscure toxemias, either of the hepatic or pancreatic type, perhaps complicated by a latent nephritis accentuated by an anesthetic or the shock of an operation, should all be treated before operation, in fact, are best treated by the internist years before an operation becomes necessary. Each patient should receive that scrupulous care at intervals so as to keep him in a healthful state and capable of undergoing a serious operation if necessary. The true cases of acute dilatation of the stomach with me have all succumbed, and all methods of treatment after it has developed have always failed. Have tried early stomach lavage, pituitrin, calomel, posture, even gastroenterostomy with same results.

DISCUSSION OF THE PAPER OF DR. E. C. DAVIS

Dr. L. C. Fischer, Atlanta.—I feel that I wish to discuss Dr. Davis's paper, not on account of any great experience, but on account of our very pleasant association for years. I recall one of the first experiences we ever had in abdominal surgery that amounted to a great deal. I had just graduated, and Dr. Davis asked me to assist him in an operation at Austell. Just here I wish to say the young men of today know nothing of what we went through in those days. While we are not Methuselahs, we began at a stage when surgery was not as far advanced as it is now.

In the case referred to, we operated in a small home, carried with us a nurse. Even nurses then were not as thorough as they are now, nor as well trained, and especially in abdominal surgery. She was given special instructions to boil all instruments in soda water, but not to boil the silk ligature material that was to be used. Cat gut was not in general use then. We used to ligate the broad ligaments with double platted or twisted silk. Much to our consternation we found that the nurse had boiled the silk in soda water. Our patient was a small emaciated woman. Primarily a poor surgical risk. We felt sure that should she lose any quantity of blood, that we would return to Atlanta much the sadder for our experience. Just as we were ready to close, the abdomen rapidly filled with blood, with what seemed to me then, an enormous stream. We both made a grab for the broad ligaments, and found that the silk had broken and released all of the blood vessels. We religated, the patient made an uneventful recovery.

Hemorrhage is undoubtedly one of the bug-bears of surgery, but this fortunately is one of the conditions that we can control more nearly, than any one of the ones Dr. Davis has mentioned. While infection is surely one of the bugbears, it is not the one I fear most in the present day. We can avoid hemorrhage by being sure of our suture material and hemostasis. Infection, we should largely control, and especially where the work is done in an institution. Our nurses and assistants should be trained, as well as ourselves. I have made it a rule for years that where we get an infection, to not blame the cat gut, the assistant nor the nurse, but to look first to myself and see if the trouble was not with my technique. Were my hands responsible, or was I careful enough in watching my assistants and nurses. Occasionally we check up the operating room, the general technique, specimens, gloves and dressings. This we do by having our technician from the laboratory attempt to make cultures from the operator's hands, those of his assistants and nurses, after they have finished work. First from the hand gloved, and then from the hands and around the nails after the gloves are removed. Also from

all dressings, ligature material, utensils and instruments. It is unusual to find any evidence of faulty technique. The examination is nearly always made when the operating room force, and operator have not been previously notified. Only once in our professional career, and that of running an institution, do I remember that cat gut was really at fault. On this occasion we had several infections in our institution, and requested Dr. Bunce to see if he could locate the trouble in our operating department. Much to our surprise he found the cat gut at fault. In my work I have had one case of post operative tetanus, which happened practically two weeks after operation. This I could possibly blame on cat gut, but in most other cases of infection, I feel that the personal element is at fault, and not the cat gut or the sterilizing apparatus.

Dr. Davis classes the bugbears of surgery as hemorrhage, infection, intestinal obstruction, and acute dilatation of the stomach. Every man has to rate these in severity, according to his own experience. The greatest bugbear to me, is intestinal obstruction. While you can control hemorrhage, and to a large extent, infection, you have no control over intestinal obstruction.

Dr. Walter Norton, Savannah.—I think it is rather unfortunate that Dr. Davis could not have continued with his very classical discussion of this subject. I am sure every surgical man in this group has been benefited and would have been further benefited if he had been able to continue with his talk.

There is not in all surgery any more important subject than that which he has presented to you. The famous Nicholas Senn, now long dead, once said that perfect hemostasis is an essential prerequisite to successful surgery. The great German surgeon Witzell once told me that surgery was "The art of the highest cleanliness and the utmost simplicity." Two of Dr. Davis' subjects have been briefly covered by quotations from these two truly great men.

The question of intestinal obstruction is certainly a bugbear to every man who does abdominal surgery. He can worry more in an hour or in thirty minutes over a case which he believes to have postoperative intestinal obstruction than any other thing I know of. Only a week ago I had a young boy, thirteen years of age, who had gone through with a most unusual convalescence from a general peritonitis. He had pulled through with it with all of the agony and heartache and anxiety that his medical attendants could possibly stand, and went home with a fecal fistula on one side still draining a little, and a small secondary abscess cavity on the other side still draining. He went home in his emaciated condition to get fat and to come back to have his hernia operated on.

Dr. George C. Mizell, Atlanta.—I have one very important criticism to make on Dr. Davis' talk. I think Dr. Davis has really cheated us and deserves some censure, and that is this, that he did not avail himself of the time that was given him by the removal of the time limit to discuss this subject to the end as he no doubt felt like doing, but for reasons of his own cut short his talk the way he did.

Now, any discussion of the four subjects mentioned in the paper is necessarily very incomplete, and Dr. Davis could not go into details and did not really reach the last bugbear that he mentioned. He, in a measure, places the responsibility for some of these conditions upon the internist, and we should accept that responsibility. There our responsibility ceases if the time of examination by the internist is too long, if the interval is too long before the patient is operated on. Very frequently a surgeon should recheck everything that has been done by the internist.

I wish to emphasize a point that is usually raised by one of my colleagues on every occasion whenever intestinal obstruction is mentioned. I refer to the remark of Dr. Niles that a cat fight means more cats, and operation for adhesions means more adhesions. Adhesions do not give trouble. What I mean by that is this: we may have an abdomen full of adhesions, with every coil of gut adherent without interference of function. On the other hand, we may have a small adhesion which produces great trouble. If the adhesion produces angulation and fixation of a movable organ, it is going to give trouble. If it does not produce this fixation, it does not give trouble. In removing a small adhesion we may, as Dr. Niles says, create more adhesions, but fortunately more adhesions do not mean recurrence of symptoms. Adhesions that give symptoms should be operated on.

Dr. A. R. Rozar, Macon.—I do not want to discuss Dr. Davis' paper because it needs very little discussion. I appreciate it as I appreciate anything else that Dr. Davis may say. He does not mean that the country practitioner is to be excused in the matter of infection. We do not have to excuse ourselves. I agree with Dr. Davis that it is always a splendid idea sometimes not only to inspect but to check up our operating room, our sterilizers, and other things.

Dr. Floyd W. McRae, Atlanta.—It is indeed a privilege for a young man to listen to a master surgeon like Dr. Davis. He has taught me much in the past and I expect to learn much from him in the future. My own rule is, all cases, except emergencies, are required to go into the hospital at least twelve to twenty-four hours prior to the operation. This is done in order that patients may become acquainted with hospital environments and also that routine preparation and thorough examination may be made.

Preparation for operation: The night before operation consists of chloretone and pantopon in hypodermics as we have worked out in recently prepared schedule. Local and gas oxygen are used for anaesthesia in all of our operative cases. We have found that this routine preparation tends to markedly decrease the nausea and also tends to combat any postoperative tendency to acute ileus or dilatation of the stomach. I have found the duodenal tube to be of material assistance in acute ileus or dilatation of the stomach. As soon as a patient begins to vomit, postoperatively, a duodenal tube is passed and is kept down continuously and the stomach is repeatedly washed out and after each washing, a small amount of adrenalin chloride, i.e., ten to fifteen minims of 1/1000 solution, are left in the stomach. This seems to combat the tendency to acute ileus or dilatation of the stomach and prevent it from becoming very troublesome.

In conjunction with Dr. Collier, the anaesthetist of Atlanta, we have worked out a technique of pre-operative and post-operative treatment, which while not eliminating nausea, certainly markedly decreases the tendency towards it and gives us good control of any post-operative nausea, so that it is not at the present time, the objectionable factor that it has proven to be in the past.

GASTRIC AND DUODENAL ULCERS*

Chas. Usher, A.B., M.D., F.A.C.S.
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The subject of gastric and duodenal ulcers has been given great consideration in the medical journals for the past few years. It is a subject that calls for the best that the medical profession has to give it—in making a correct diagnosis—in selecting the proper treatment—and in perfecting the operative technique.

Ulcers occur at all ages, in every country and in every climate—Travers reported the first duodenal ulcer in 1817. The first case was operated on March 22, 1893. The first operation for perforation was in 1894. Ulcers of the duodenum are supposed to follow burns and scalds and there are also uremic and tubercular ulcers of the duodenum. But the ulcers that we generally speak of are considered to be secondary to some primary infection. Ulcers are found at any age of life. They are found in young babies. The youngest that I found reported in the literature was two months old. The

oldest person was 77 years of age. Occasionally a sudden death is due to perforated duodenal ulcer—the ulcer having never been suspected before.

There is no organ in the abdominal cavity when diseased which gives a clearer history than duodenal ulcer—the history of duodenal ulcer is clear and distinct—the symptoms are different from anything else in the abdominal cavity and the same is true of a perforated duodenal ulcer. In making a differential diagnosis, one must consider the appendix, stones in the genito-urinary tract, pancreatitis, gall bladder disease, gastric ulcer and lead poisoning. The diagnosis is made from the clinical history and x-ray examination. Carman of the Mayo Clinic made a correct diagnosis in ninety-five and one half per cent of his cases. Physical examination is worth very little. Pains coming on with clock-like regularity two to five hours after eating, which are relieved by eating and this going on for a number of years in which there are frequent periods of no symptoms, and generally the patients feel better during summer and winter—all this is highly suspicious of duodenal ulcer.

It is said that every duodenal ulcer should first have medical treatment and then if the ulcer does not heal the patient should have the benefit of surgery. There are three types of operations, Gastroenterostomy—with or without excision of the ulcer—Finney's operation and Horsley's operation. An eminent surgeon said that 90 per cent of duodenal ulcers will get well without excision of the ulcer.

The study of the stomach began about 1833 by Wm. Beaumont and his famous patient, Alexis St. Martin, who had a permanent gastric fistula, gastric surgery began about 1881. The first gastroenterostomy was made Sept. 27, 1881, by Wolfier of Vienna. But the operation was suggested by Nicolandoni, his assistant.

As to etiology, C. H. Mayo says "Gastric and duodenal ulcers are probably the result of local thrombi from infection by a certain group of streptococci which grow in an acid field."

*Read before the Medical Association of Georgia, Savannah, Ga., May 2-4, 1923.

The primary infection of gastric ulcer and also duodenal ulcer, is generally in the appendix, mouth, teeth, gums, antrum, other accessory sinuses or nasopharynx. The diagnosis of gastric ulcer is not as simple as duodenal ulcer. "The pain is variously described; it is a deep boring, burning or aching pain, there may be gnawing or sense of acidity or a desire for food or warmth, the pain in the majority of cases is said to be on the left side or high in the epigastrium—it may be in the back," (Moynihan). Ulcers of the stomach cause pain an hour or two after eating—a duodenal ulcer from 2 to 5 hours after eating. The nearer the pain to the meal, the nearer the ulcer to the oesophagus. In gastric ulcer, food eases pain; in duodenal ulcer, food also eases pain. But, according to Moynihan the rhythm is different—gastric ulcer, food, comfort, pain, comfort. In duodenal ulcer, food comfort, pain.

"In these diseases which oftenest cloud the diagnosis, such as chronic cholelithiasis and chronic appendix we obtain our greatest diagnostic aid from wide irregularity of symptoms during the period of attack. Yesterday's pain came before meals, today's pain after meals, tomorrow's pain an all-day miserable feeling—food, ease yesterday, because fasting the previous day, today food pain wholly reflex; vomiting one day and gas another; yesterday well, today in the depths mentally. Nothing follows in sequence day by day because the stomach behaves properly unless irritated by the distant lesion and this extrensic lesion is irregular in its influence. The stomach then delivers what symptoms it may when the irritation is great enough." (Graham).

Chemical examination is hardly worth doing and physical examination is of little value. More mistakes are made in the diagnosis of gastric ulcers than is the case in any other abdominal disorder. The stomach may be called the mouth-piece of many disorders outside of the stomach—such as "migraine, locomotor ataxia, Pott's disease, syphilis, thoracic or abdominal aneurysm, cardiospasm, angina, myocardial insuffi-

ciency, herpes zoster, lead poisoning, pneumonia, nephritis and viceroptosis" (Eusterman).

The x-ray is very valuable—in the Mayo Clinic, Carman made a correct diagnosis in ninety-seven and one half per cent of his gastric ulcer cases.

Cancer rarely develops after duodenal ulcer but is rather common after gastric ulcer.

There are about four times as many duodenal ulcers as gastric ulcers. Gastric ulcer is found about twice as often in men as women, while duodenal ulcer is found about there times as often in men as in women. There are duodenal ulcers with purely gastric histories and also there are some gastric ulcers with purely duodenal histories. A Wassermann test should be made in all gastric and duodenal ulcer cases. There may be gastric and duodenal ulcers and there may be multiple gastric ulcers. It is generally conceded now that all gastric and duodenal ulcers can be seen, felt, or demonstrated. In making a differential diagnosis, it is well to consider the following diseases, for gastroenterostomy has been made for each—thinking the patient had a gastric ulcer: 1. Chronic appendicitis, 2. Tuberculosis of the intestines, 3. Gall bladder diseases, 4. Cirrhosis of liver, 5. Splenic anemia, 6. Tabes dorsalis, 7. Disseminated sclerosis, 8. Vomiting of pregnancy, 9. Lead poisoning, 10. Prolapse of the kidney, 11. Colic adhesions, 12. Epigastric hernia. The question arises, what ulcers should be operated on? Bennett, of London, quoted by W. J. Mayo, says: 1, cases with long history; 2, cases which have relapsed after medical treatment; 3, cases with pyloric obstruction; 4, all cases with large ulcers adherent to surrounding structures; 5, practically all cases in which a test meal is retained in the stomach for more than six hours; 6, all cases whose economic condition makes prolonged medical treatment impossible.

There are two schools of thought as regards the proper treatment of gastric and duodenal ulcers. Some believe that the early cases should be treated medically and that every operative case should have medi-

cal attention following his operation—others believe that medical treatment is worth very little and its proper place is after operation. Frank Smithies says, if one would tag an ulcer case and follow it from its beginning to the autopsy that he would find some very interesting history—whether treated medically or surgically.

What operations should we do for gastric ulcer? Gastroenterostomy?

Here are some of the reasons why gastroenterostomy fails: 1, Pyloric and does not drain. 2, Failure to put gastroenterostomy to the bottom of the stomach. 3, Failure to make the opening in the transverse mesocolon large enough and failure to suture it to the posterior walls of the stomach. 4, Making loop too short or too long without due regard to the size and situation of the stomach. 5, Neglecting to select suitable diet following operation. (W. J. Mayo).

Moynihan gives the following reasons why gastroenterostomy fails: 1, Jejunal loop too long or too short. 2, Raw surfaces left. 3, Jejunum has been rotated around its longitudinal axis. The twist may cause obstruction. 4, Opening too small—should be two and one half inches long. 5, Opening badly placed. 6, Sutures placed too far from the cut edges. 7, Failure to close the rent in the mesocolon. 8, Use of unabsorbable suture material. 9, Anastomosis with portion of the intestine unsuitable for the purpose. 10, Anastomosis to the distal pouch of an hour glass stomach. 11, Ventral hernia of abdominal wall.

In gastric ulcer, it is generally considered, all things being equal, the ulcer should be excised or cauterized and followed by posterior gastroenterostomy. Ninety per cent of duodenal ulcers and eighty per cent of gastric ulcers are cured by single operations. In doing gastric and duodenal surgery it is the same as surgery elsewhere—the operation has to be suited to the patient and not the patient to the operation. The Finney operation and the Horsley operation are excellent operations in suitable cases.

I wish to report from my work 4 duodenal ulcer and 2 gastric ulcer cases; 1, duodenal ulcer about 9 years standing, ulcer

perforated 18 hours—patient in very poor condition—perforation closed with 2 purse string sutures No. 1. chromic catgut-omentum tacked over sutures. Drain placed in right iliac fossa. Patient was able to take liquids freely and was on soft diet—and stomach gave him no trouble—but double pneumonia developed on 12th day from which he died. 2, chronic duodenal ulcer of about four years standing. This patient had a typical history and Dr. Cole confirmed the diagnosis by x-ray examination. A posterior gastroenterostomy was made, using No. 0 chromic catgut sutures. The rent in the mesocolon was tacked to the gastroenterostomy suture line using very fine silk. No drain was used. Patient made an uneventful recovery and left the hospital at the end of two weeks. This patient still remains well. 3. This patient had a bleeding gastric ulcer. He had several hemorrhages. The stomach was opened and an ulcer small and hard on the posterior wall greater curvature—the ulcer had eroded into a small blood vessel which was still bleeding. The ulcer was shaved down and then sutured up with chromic catgut No. 0. Stomach closed using the same material—abdomen closed—without drainage. This patient made a good recovery and left the hospital in two weeks. I have lost track of this patient, but the last I heard of him, he was still well. 4. Pin-point perforation of gastric ulcer anterior gastric wall—about eighteen hours duration. This patient also had acute cholecystitis and acute pancreatitis. One purse string suture of chromic catgut No. 0 was used in closing the perforation and the omentum was tacked over the suture line. Gall bladder was drained. Patient had a rather stormy time for about a week. However, he left the hospital at the end of four weeks in good shape. I heard from him a year later and his condition was still good. 5. Ruptured duodenal ulcer—four hours duration. This patient had an old chronic ulcer of nine years duration. The pain would come on about three hours after eating. During the summer and winter he would be practically free from pain. He was doing nicely

and had no trouble, and he thought maybe he was getting better, when suddenly this perforation occurred. The ulcer was cut out and a posterior gastroenterostomy was made. Wound closed without drainage—a drain was put in the lower abdomen by making a small incision. There was some post-operative hemorrhage but never was enough to cause serious trouble. There was a slight infection of the wound but with wet dressings it soon closed up. He got along nicely for about four months, then he began to have some pains a few hours after eating—they were not the clock-like regular kind as he had had previously. There was considerable gas. I sent him to Dr. W. R. Dancy for regulation of his diet. He is now free from symptoms and has gained ten pounds. 6. Chronic duodenal ulcer. This patient had been sick since 1917—appendectomy 1917. He had pains coming on four to five hours after eating—the pains were in his left abdomen, left epigastrium and in the back. Had six hour bismuth meal retention. He was examined by two x-ray men—one said he had duodenal ulcer and the other said he couldn't find any. We found an old ulcer at the pyloric ring. We did a Finney operation and tacked some omentum over suture line and removed a strawberry gall bladder, put in a drain at the gall bladder stump. This patient made a good post-operative recovery and went home on the 17th day in good condition. But began to have trouble with his diet, so I referred him to Dr. W. R. Dancy for proper diet. He is about all right now, having gained eleven pounds, but it is too soon to say what his final results will be.

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- Surgery—Dr. J. Sheldon Horsley.
- Clinical lectures—Dr. John F. Erdmann.

DISCUSSION ON THE PAPER OF DR. CHARLES USHER

Dr. Joseph R. Burdett, Tennille.—I would like to ask Dr. Usher what medical treatment he advocates in duodenal ulcer?

Dr. David T. Heyser, Atlanta.—I gather from Dr. Usher's paper that one of the greatest difficulties in the problem of handling these cases is the diagnosis. I share the opinion of a very celebrated American surgeon who, at a meeting of the American Medical Association, held in Boston, 1921, made a certain statement. Those of you who were present at that meeting may remember the excellent symposium on gastric and duodenal ulcers and probably recall that a very famous surgeon made a startling statement. I think the whole meeting was electrified when Dr. Finney said that his greatest difficulty in the handling of a gastric or duodenal ulcer case was in making a correct diagnosis. He discountenanced absolutely the findings of the x-ray and chemical examinations of the stomach, and physical examinations of all kinds as being of value in making a diagnosis. He said that frequently he had opened the abdomen and viewed the stomach and still was in doubt as to the existence or non-existence of ulcer. He had palpated the stomach, then opened it, looked into it, and was still in doubt.

A few days after listening to this symposium it was my good fortune to see Dr. Mayo at his clinic operate on several cases of gastric ulcer, at which time he criticized and rather ridiculed the statement Dr. Finney had made a few days before, and said that in his opinion the diagnosis of gastric and duodenal ulcer was comparatively easy, and he confessed he was shocked when he heard Finney say that after opening the abdomen he was frequently unable to demonstrate the ulcer, and showed to us at that time a very beautiful and illuminating method of diagnosing an ulcer absolutely when the abdomen was opened. Some of you probably recall his method of abrading the surface of the stomach before opening it in the search for ulcer, making an abrasion over the area at which the ulcer is suspected.

You all know that Dr. Finney's statement has a great element of truth in it. You have seen these cases and have tried to feel the ulcer through the coats of the stomach and have been unable to do so, but by the method of Dr. Mayo the position of the ulcer, shape and size of it are beautifully demonstrated. A few moments after rubbing the surface of the stomach there appears an area that looks like if red ink or mercurochrome had been dabbed on. I have had the opportunity of doing this in some cases in which I was in doubt and I find it a very valuable method.

Dr. Stewart R. Roberts, Atlanta.—It seems to me, this subject, particularly at the present time in the south, is worthy of more discussion. We should remember one or two diagnostic axioms which are generally subject to exception. Cabot says that every ulcer in men over sixty in a serious condition is apt to be complicated by arteriosclerosis, by malignancy, or by some prostatic disease. Between twenty and sixty, if we will remember

the abdominal conditions, the pelvis in the female, the prostate in the male, and visceroptotic states are a part of the structural organic pathology in the abdomen, it will be a step forward. Furthermore, this organic structural pathology in the abdomen is apt to be from the ovaries, from gall-bladder disease, gastric and duodenal ulcers, and may for gross purposes be summarized under the one name of gastric or peptic ulcer, and diseases of the appendix, and if we remember these things we shall have made further advance.

While Mayo himself has discussed quite at length the rarity of duodenal and gastric ulcer in the south and offered various theories to account for that supposed rarity, personally, I believe that duodenal and gastric ulcers are rare in the south because we fail to diagnose them. We have apparently, in the last year or so, woken up to their frequency. We have as many gastric and duodenal ulcers here in the south proportionally as in any city in the United States. We have seen three duodenal ulcers in women from one short railroad in Georgia; I mean women living in towns along that road.

We believe that the diagnosis of gastric or duodenal ulcer is in some cases quite easy, in other cases moderately so, and still in other cases it is extremely difficult. We believe, furthermore, that there are some cases of gastric and duodenal ulcer which are so difficult that they will be mistaken as far as diagnosis is concerned. For instance, some time ago we made a diagnosis of duodenal ulcer in a man with all the clinical syndrome we needed, and it was wound to an adhesion between the head of the pancreas and first part of the duodenum, yet he had all the classical symptoms and x-ray findings of duodenal ulcer. We believe that any common chronic abdominal condition occurring in a man or woman between twenty and forty, the first step in diagnosis is to suspect an ulcer, not wait until the surgeon finds it, but suspect it. In every case of chronic abdominal complaint there is a cause and diagnosis is a process of reasoning after we have the evidence in hand. I do not believe we can construct gastric pathology on the titration of the gastric contents. I do not believe our experts are in agreement in the diagnosis of duodenal ulcers. It is one thing to have an agreement on the ulcer problem, and another thing to have made a diagnosis. With the evidence we can gather in the form of titration of the gastric contents, a careful history, a careful examination of the abdomen, and such x-ray examinations as we can make, we can come near reaching a conclusion. There are some cases in which a positive diagnosis in the present state of our medical knowledge is impossible, but we have one safety valve for the benefit of the patient. It is this: In any abdominal condition that arises, one's clinical judgment can be drawn upon, and sometimes in these

cases we must throw out our x-ray evidence, if there be any, titration of the gastric contents, and so on, and rely on the question of clinical judgment.

I believe we are on the eve in the south of realizing that we have proportionately as many gastric and duodenal ulcers as there are anywhere, and it is a question of diagnosis.

Dr. Usher (closing).—In answer to the question of Dr. Burdett I will say that I use the Sippy treatment. I wish to thank Dr. Roberts and the other gentlemen for their discussions.

A STUDY OF THE PURITY AND QUALITY OF THE MILK SUPPLY OF GEORGIA AND ITS RELATION TO CHILDREN CONSUMING IT.*

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In order that we may have a clear understanding of the difficulty in procuring a pure milk supply I wish to give you briefly an out-line of the habits of the animal producing it.

"The cow is an animal of unclean habits. She pollutes her own bedding. She neither sweats nor bathes. She enjoys caking her sides with her own and her neighbors dung. Her skin is filled with innumerable parasites. Her coat is most always, day and night, covered with flies. She licks her own and her neighbors dirty coat. Her tail is long and this helps her to scatter her filth. She does not have control over her sphincters. Though a gourmand she is not capable of selecting her own food. Combined with all these things she often harbors disease to which man is susceptible. Her teat canals harbor germs."

Milk and its products as outlined by the U. S. Department of Agriculture Standards is the whole, fresh, clean, lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, or such longer period as may be necessary to render the milk colostrum free.

Milk sold as certified milk must be free from pus and injurious bacteria and must not contain more than 10,000 bacteria of any kind per c. c. at the time of delivery to con-

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sumer. It must be free from all contaminating foreign matter or chemical substances added for preservative or coloring purposes. Immediately after milking the milk should be cooled and thereafter kept at a temperature below 50 degrees F. until delivered to consumer.

Pasteurized milk is milk that has been subjected to a temperature of 145 degrees F. for not less than 30 minutes and should not contain over 50,000 bacteria per c. c. when delivered.

Sterilized milk is milk that has been heated at a temperature of boiling water or higher for a length of time sufficient to kill all organisms in it.

Skimmed milk is milk from which practically all the fat has been removed. Another source of contamination of milk is the milker who is often diseased in body and also of unclean and filthy habits. The vessels into which the milk is drawn are often of the large mouthed type and they also are often unclean. The bottles which the milk is delivered in are often carried in to the sick room and go back to the dairy unwashed, and carry with them various contagious and infectious disease germs to pollute the other containers if they are not sterilized. These unclean bottles are often refilled with unclean milk and again started on their daily rounds to be fed to your sick and well babies.

Dr. Rosneau says that "Milk is probably the cause of more deaths and diseases than all other foods combined." Milk as a food is absolutely necessary in the very young, the old, the feeble and sick. This is the best reason why milk should be pure and of good quality. These four classes are easily made sick on milk laden with bacteria, where a strong individual would not be affected. Milk is often not refrigerated at the dairy but is allowed to retain its animal heat, and is transmitted to its destination in some instances as long as eight hours after it has been milked, and is here kept and sold and not always after eight hours in properly refrigerated containers. The teat canals of the cow are bacteria laden and unless the first milk is expressed before

milking is begun you have a bacteria laden milk from the teat canal as well as from the cow, milker, utensils and containers. Under these conditions germs multiply by the millions and by the time the milk reaches the baby you would have a food unfit for human consumption. This milk would appear clean and white to the eye. There is no food that carries as much filth and germs as milk and yet to the eye, taste, and smell appears to be of good quality.

Dairymen are not unlike other business men, because they have unscrupulous men in their ranks.

Milk is adulterated by the addition of water and preservatives. The addition of water is frequently practised and we are here confronted with a problem of purity, and one of quality which often means under feeding in babies, besides paying 10c to 25c a quart for water.

The standard of purity and quality as fixed by the state of Georgia is: Butter fat $3\frac{1}{4}$, total solids not less than $12\frac{1}{2}\%$ and a bacterial count of not more than 200,000 bacteria per c. c.

This is not a bad standard and milk produced under these conditions might not cause so much harm in strong, well and healthy adults, but milk of this standard of purity is unfit for feeding young and sick children, whose powers of resistance are already lowered by youth and disease. These children should be fed a milk preferably with a bacterial count not over 10,000 bacteria per c. c. Certainly not more than 20 to 30 thousand bacteria per c. c.

Under the Georgia Law Code Section 2119 (acts 1914, page 148, and Penal Code Section 453 B) the state veterinarian goes over the sanitary conditions of dairies, milk depots, and milk and its by-products in the state of Georgia and under this rule he has a right to provide such rules and regulations governing the milk supply of the state as he deems necessary. When these rules and regulations are approved by the Commissioner of Agriculture they have the right to enforce the law and as far as practical, these regulations are to conform to the standards recognized and approved by the

U. S. Department of Agriculture for such milk and milk food products. Under this law it is the duty of the state veterinarian to devise some system in the home supply of dairy and dairy products and for that purpose he is authorized to require each and every manager of all public dairies, creameries, butter and cheese factories, milk depots and other places where dairy products are sold or kept, to report annually on or before September 1, on blanks furnished by the state veterinarian full and accurate information concerning the quality of milk or cream bought or sold or the average price paid, for same, the number of cows used in or contributing to such creamery, dairies or factories; and the number, name and address of patrons of creameries, or public dairies or milk depot and the number of cows owned and milked by each patron, the number of gallons of milk sold, etc., and it is provided that the failure on the part of any person to furnish this information correctly is a crime punishable by law.

The provision of this law would not prevent the governing authority of any municipal corporation from enacting ordinances governing the handling of the milk supply in our respective cities.

Inasmuch as the laws of the state governing the control of the milk supply clothe the state veterinarian with the authority to provide for a healthy and safe milk supply by the promulgation of any rule, he deems necessary to the enforcement of a pure milk supply and by going a step further and suggesting that the regulation of the U. S. Department of Agriculture be followed as nearly as practically, there can be no apparent reason for any flagrant violation of these rules by any dairyman in the state and if investigation should show that the milk supply of Georgia is unwholesome our citizens should call for an enforcement of the law in order that the health and future happiness of our citizens might be insured.

No mention is made of certified milk by the U. S. Department of Agriculture prior to 1917. Under the regulation of the U. S. Department of Agriculture enacted in terms of law in 1917, group "A" raw milk should

not contain more than 60,000 bacteria per c. e. Prior to this the raw milk grade "A" had to show a bacterial count of not more than 100,000 per c. e., therefore the purest milk called for by U. S. Department of Agriculture shows a highest count of 60,000. Whereas the standard fixed by Dr. Bahnsen and regularly promulgated by him and approved by the commissioner of agriculture, regulation 5, paragraph 15, says that milk may be sold containing 500,000 bacteria per c. e. Now the actual lowest average bacteria count of milk by anyone during the year 1921, according to the state chemist's representative was 610,000 bacteria per c.c. A milk of this quality would be unfit to be used even as pasteurized milk for by regulation of the U. S. Department of Agriculture group "A" pasteurized milk must not contain more than 200,000 bacteria per c. e. before pasteurization. We would judge from the foregoing that the average grade of milk being produced and sold in Georgia today is unfit to be sold either as raw milk or to be used as pasteurized milk.

Dr. Bahnsen says that milk containing 500,000 bacteria per c. e. is unwholesome and may be dangerous and further says that milk showing a greater count the sale should be prohibited. The average bulletin issued under his direction wherein is shown any examination of milk that was higher count should be marked "Sale prohibited" as they would mark syrup and other articles of food of far less importance. He says on page 17 in his regular manual, certified milk is easily produced but he has not mentioned certified milk in his regulation.

Dr. Bahnsen says, "The state of Georgia, provides in a very limited way, for the inspection and supervision of the milk supply of the state. We have at present only one milk and dairy inspector, and as a matter of course he is not able to cover the field in anything like a thorough and systematic manner. The milk samples taken by the inspector are analysed in the Laboratory and the state Chemist's findings are made public in monthly bulletins."

The following figures are based on gleanings from 12 bulletins issued by the Department Chemistry of the State:

received from only three—Savannah, Valdosta and Atlanta. The following is a copy of the letter sent:

	Lowest Bacterial Count	Highest Bacterial Count	Average Bacterial Count	Dirt	None	Spec. Ex.
Jan. -----	30,000	2,000,000	610,000	21	2	22
Feb. -----	20,000	1,400,000	285,000	16	2	20
Mar. -----	20,000	4,000,000	625,000	32	15	48
Apr. -----	20,000	6,000,000	1,172,000	35	12	47
May -----	30,000	7,600,000	1,503,000	32	15	46
June -----	10,000	9,000,000	966,000	48	15	65
July -----	50,000	5,000,000	1,785,000	11	6	17
Aug. -----	50,000	2,100,000	530,000	14	7	21
Sep. -----	20,000	10,000,000	1,273,000	24	3	27
Oct. -----	20,000	10,000,000	842,000	18	9	27

Nov. No exam. was made this month.

Dec. No exam. was made this month.

Average Lowest Bacterial Count	Average Highest Bacterial Count	Average Bacterial Count	Dirt	None	Spec. Ex.
27,000	5,710,000	959,100	260	95	323

The average of the lowest bacterial count for 1921 was 27,000. A bacterial count of not over 10,000 per c. c. is desired in infant feeding and in aged and feeble adults. This shows clearly we are not getting a proper milk supply for these patients. The average of the highest bacterial count is 5,710,000 per c. c. This shows clearly that we are getting a vast amount of impure and unclean milk. Since milk containing more than 200,000 is above the state's standard it is a menace to the health of adults. When fed to infants it will produce violent digestive disturbances and in many instances death, and should not be permitted to be sold, at least as a food for babies.

The most deadly germs found in milk are typhoid, tubercle bacilli, dysentery, and diphtheria. You frequently have sporadic outbreaks of these groups and we wonder and are unable to trace the source. They are possibly coming from some milker who is himself a carrier or has the disease in his own family.

Letters have been sent to the mayors of Atlanta, Macon, Augusta, Savannah, Rome, Valdosta and Albany, and a reply has been

"I am making a study of the purity and quality of the milk supply of the State of Georgia. Please advise me what means and methods are used by your city to determine the purity and quality of your milk supply. If you have in use such methods, please have your chemist forward all reports of the examinations of his milk inspections which he has made for the last twelve months, at least.

"Large numbers of children are fed on milk. In fact, milk is absolutely necessary for children, and it is for this reason that I am making this study so that we may know the quality and purity of the milk that our children are being fed.

"I am sure that you frequently tire of the various demands made on your time, but I hope that you will not consign this letter to the waste basket; but try and see that I get a reply from the department to which it is referred. If you have no method of inspection, please so state in your letter."

There are good dairymen in Georgia who are producing milk that is clean and shows a bacterial count of 10,000. These men have to suffer as a result of poor methods practiced by others and should be protected.

The state chemist does not make any record of adulterations in his analyses. The accompanying chart will show to what extent this was practiced on one of our largest cities until the milk supply was regulated.

Mr. Wilson also states they make from one to two thousand examinations a year, but in the last two years these examinations have not been an average. Only 323 were made in 1921, and 260 of these specimens contained dirt.

Far too few examinations are being made with the present number of men employed. The state is today paying \$1,800 a year for a bee inspector; why not have this money spent in milk inspection? I wonder if you think more of the health and happiness of bees than we do our children. It was at one time true, and may be now, that we are spending more money for the preservation of animal life than on the human family.

This article is written in fairness to all, and it has been the author's aim not to say anything harsh about any department.

The following table gives the number of deaths under two years of age from diarrhoea and enteritis, starting with the year 1909, that being the year milk inspection was started in the city of Portland.

1909	-----	100	32.6
1910	-----	73	21.5
1911	-----	57	15.2
1912	-----	38	9.3
1913	-----	29	7.7
1914	-----	15	3.6
1915	-----	14	3.4
1916	-----	12	3.0
1917	-----	33	8.2
1918	-----	24	5.1
1919	-----	26	9.5
1920	-----	22	4.2
1921	-----	19	3.5
1922	-----	17	3.2

DISCUSSION OF THE PAPER OF DR. N. L. SPENGLER

Dr. V. H. Bassett, Savannah.—A paper of this kind should not go without some discussion. I feel convinced that the facts Dr. Spengler has placed before us regarding the milk supply in Georgia are correct. He is not criticizing the State Agricultural Department which has milk inspection in charge. We all know that the offices of

that department are efficient and do a great deal of good. They always respond to the requests we make of them for inspection of dairies at a distance, but they themselves know that at best the service is inadequate for a state the size of Georgia. They would need a great many more investigators and more money to get efficient action. In any city or in any community fully thirty per cent. of the samples of milk taken will be adulterated, and fully fifty per cent. more will have an unduly high bacterial content. It is a condition that will take many years and money and time to remedy. It costs this city \$5,000.00 a year to do milk inspection. The citizens of Savannah look to the economic side of the subject. We furnish our citizens milk of pure quality, and it is surely worth the difference in the cost of inspection. In place of watered milk, we supply pure milk, and that saving alone would pay the cost of inspection. But the health aspects are more important. Milk inspection is an economic measure which should be in the Agricultural Department which has to do with the protection of milk for economic purposes, keeping an adequate standard for fat content and adequate provisions for milking for health protection. The health problem has to do with the inspection of milk the same as food protection. Meat inspection is relatively unimportant as compared with milk inspection, and the amount of money appropriated should total the sums appropriated for all other forms of food inspection.

Dr. Frank K. Boland, Atlanta.—I am very much interested in this question as a member of the Committee on Public Policy and Legislation of the Medical Association of Georgia. All practitioners should be interested in this subject whether they are doing pediatric work or not. There are certain questions that come up in which the end results are for the welfare not only of children, but especially the welfare of the whole community. Taking this view of the matter, the Committee on Public Policy and Legislation in its report presented to the House of Delegates day before yesterday embodied a recommendation to refer this matter to the next committee, to bring it up before the legislature in proper form, to change it from the Department of Veterinary Medicine to the Board of Health where it belongs, and the matter will take that course.

I regret very much that we have not a larger audience present to hear Dr. Spengler's paper, because he has discussed the subject carefully, and it is a matter which ought to interest every one of us.

Dr. W. A. Mulherin, Augusta.—Dr. Spengler is to be congratulated on bringing this very important subject before the Association, also for the excellent work he has done along this line. Likewise, I think Dr. Boland, Chairman of the Legislative Committee, is to be commended on having

taken prompt action on this subject. When we consider that, next to mother's milk, cow's milk is the most important food for babies, and that death and sickness in our cities depend, in a large measure, upon the milk supply, it stresses the importance of giving due consideration to this subject.

The question naturally arises, what is the best method to insure for a community a safe and proper milk supply? I am sorry I did not have an opportunity to hear all of Dr. Spengler's paper, but he probably brought out just the points I would stress. To-day there are three methods under consideration to insure decent milk for a community, namely:

Pasteurization, which means heating the milk to 155 to 165 degrees for 20 minutes or a half hour. Theoretically this is ideal, for it kills the bacteria without changing the composition of the milk. Objections against this method are that it is a troublesome and also an unnecessary procedure, for the same safety, and end results, can be obtained by boiling the milk. Again, it is a fact that pasteurized milk may give a false sense of security, and permit too much commercialization. Pasteurized milk is dangerous when pasteurization is practiced on a large scale, for instance, when the milk supply for a city or community has to be pasteurized according to law; unless the time of pasteurization is stamped on the bottle there is a dangerous element in that procedure.

We know that nature sours milk through deposition of lactic acid bacilli from the air, to warn us that the milk is not fresh. If we destroy this safeguard by pasteurizing, toxins can develop in old milk, and unless the time of pasteurization is stamped on the bottle, the public is not sufficiently safeguarded. Personally, I do not approve of commercial pasteurization, for there is too much commercialism in the world today, unless a very rigid inspection is maintained.

The simple process of raising cow's milk to the boiling point accomplishes the death of ninety-eight and one half to ninety-nine per cent of all bacteria. It likewise makes milk more digestible, does not in any way destroy vitamin A or vitamin B, and only to a very inconsiderate extent affects vitamin C. It is, to my way of thinking, a safe, practical and easy method of insuring the milk supply for babies, provided the milk is fresh and reasonably clean.

A third method of insuring good milk is by bacterial count. Ideas regarding the number of bacteria permissible have varied considerably since the inception of this method. At first certified milk permitted a bacterial count of 10,000 to the cubic centimeter. This demand was considered too rigid and the bacterial count was permitted to rise to 30,000 per c.c. Today it is recognized that healthy babies can tolerate 100,000, and sometimes 200,000 per c.c., but too frequently delicate

babies are made sick upon this bacterial count. The bacterial count is an excellent check upon determining good milk and dirty milk. It is natural to suppose that if milk carries a high bacterial count, it is dirtier than milk carrying a low bacterial count. Personally, I think milk running no higher than 50,000 per c.c. is a clean enough milk to feed babies, provided it is subjected to the boiling process. I wish to go on record as favoring in every way any movement made by this Association to insure to the babies of Georgia a better milk supply than they are receiving today.

THE EPIDEMIC OF DENGUE FEVER IN SAVANNAH IN 1922*

William H. Myers, M.D.

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It was my intention to write a rather complete history of the epidemic of dengue which we had in Savannah, in 1922, but response to the questionnaire sent to the local profession, did not yield sufficient replies for such history, as only twenty-two of our physicians were able to give data.

The epidemic prevailed in Savannah from the middle of August until early in November, 1922. This was probably one of the most extensive in its scope of any epidemic of dengue that has been reported anywhere, and spared very few, old or young, black or white, so that the number attacked in the city of Savannah must have been into the ten thousands. It was estimated by the Acting Health Officer as in the neighborhood of thirty thousand which in a population of eighty-three thousand, makes a very high rate of morbidity. All authorities cite the epidemic in Galveston in 1897, as being an example of incidence of the disease. There were twenty thousand cases there, but if we had thirty thousand, ours must have been more extensive and therefore one of the greatest experienced. The disease came from the southern part of Florida along the travel routes, attacking the people in the towns situated along the rail lines, and on the automobile roads, and spread, as it always does, along the line of communication, to become more slowly distributed to the outlying sections.

The first case which came under my ob-

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servation was on August 7th. This gentleman had come about six hundred miles in an automobile, and very graphically described his suffering, while driving a very popular make of car, which tended to increase the racking pain which he endured. The disease at that time, so he stated, was so prevalent in certain towns in the southern part of Florida, that business was in some instances suspended. The epidemic, having reached here, seemed to come in three or more distinct waves. There would be a subsidence only to become stronger in a few days, and advancing and receding until the crest was reached in the early part of October, from which date it rapidly subsided and by the first of November had practically disappeared.

Manson defines the disease as: "A specific fever conveyed by '*Stegomyia fasciata*' and possibly other mosquitoes, occurring usually as a rapidly spreading epidemic; in typical cases, characterized by a suddenly developed primary fever of about three days duration, succeeded by a period of apyrexia—actual or relative—and this again by a milder secondary fever accompanied by a rubeoloid eruption. Throughout the febrile stages, and often subsequently, severe rheumatic-like pains are a prominent symptom. The disease in its active form lasts about a week and is attended with little, if any, mortality."

Ashburn and Craig, working in the Philippine Islands in 1908, came to the conclusion that the "*Culex fatigans*" mosquito was the intermediate host, and demonstrated that the germ of dengue was in the liquor sanguinis, and that it would pass through the Chamberland filter, and that when the filtrate was injected into a non-immune person, that person would develop dengue. In 1916, Cleland, Bradley, and MacDonald, in Australia, definitely proved that the virus is carried by the "*Stegomyia fasciata*" (*Aedes aegypti*), and that the "*Culex fatigans*" is probably a vicarious host, if indeed it plays any part at all in the transmission of the disease.

In an epidemic in Formosa in 1915-16, observations were made by Koizumi, Yamagu-

chi, and Tonomura, which incriminated other mosquitoes, such as "*Stegomyia scutellaris*," and "*Desvoidea obturbans*," but their conclusions have never been recognized as final. These writers also showed that the very small amount of 0.00005 of c.c. serum from a dengue patient, is capable of producing the disease, and that this amount is lethal to guinea pigs.

The "*Stegomyia fasciata*" is now conceded to be the carrier that transmits the disease, but under the accepted name "*Aedes Aegypti*." This insect has borne, at different periods, the name of "*Stegomyia fasciata*," "*Stegomyia calopus*," and "*Aedes calopus*," commonly called "Yellow fever," "House," "Little Day," and "Tiger," and finally classified as "*Aedes Aegypti*." This mosquito breeds about the habitations of man, in the back yard litter, such as bottles, cans, buckets, cisterns, and in places where a spoonful or more of water will stand long enough for the eggs to hatch and the larvae to develop. It flies by day and inhabits bedrooms and other portions of the house, where it readily feeds upon all occupants who are unprotected.

Dengue is a coast disease and prevails in the hottest part of the year, after the rainy season has ended. Outbreaks usually begin in July or August, and continue until the advent of cold weather. It is essentially a tropical disease, and few localities in the tropics have not been visited by it. However, it has traveled as far north as Philadelphia, New York, and Boston, in this country, and into Syria in Asia. Perhaps of all places in the world, it is most frequently met with in the West Indies, and it is no doubt from that locality that the epidemic of 1922 was introduced into Florida, and thence northward to Georgia.

A peculiarity noted by Manson, in India in 1872, is the characteristic feature of the dengue epidemics, the suddenness of their rise and extension, and the general incidence of the disease of an affected community. In Amoy, he noted that seventy-five per cent of the people were affected in a few weeks, that all ages, occupations, color, and social strata, were alike subjected to it, and that

in about eight weeks the disease had run its course, and the only material left for it were the visitors coming in from unaffected districts.

Pandemics of dengue have recurred about every twenty to twenty-five years. The first being reported in Java, by Bryton in 1779, and noted by Rush, in Philadelphia, the next year.

SYMPTOMS—The course of the disease is divided into three stages—(a) the stage of invasion, (b) the stage of remission, (c) terminal fever and eruption. The first stage lasts two or three days. The second stage from twelve hours to three days. And the terminal fever and eruption from one to three days.

The symptoms in different epidemics vary quite considerably, and there are differences in the temperature curve, eruption and other manifestations which appear regularly in certain epidemics. And each epidemic is likely to have some characteristics of its own. In the epidemic which we observed in Savannah, the onset was sudden in a large proportion of cases, but prodromes were occasionally noted. Scott, in reporting on the epidemic in Louisiana in 1922, states that over fifty per cent of the cases there were preceded by coryza, indefinite aches and pains, sore throat, dizziness, languor, and headaches. But such prodromes were not the rule in Savannah. Manson says that an attack of dengue usually sets in quite suddenly, but malaise for a few hours may precede the onset.

The disease is ushered in by a chill or a chilly sensation, and comes on as often in the night as during the day. The patient refers to the precipitate attack and complains greatly of the excruciating pain in the head, back and legs. When seen, the face presents a characteristic appearance, being purplish, swollen, apathetic, and very often has a scarlatiniform flush, which usually extends over the whole body. The eyes are red and injected, and mild photophobia may cause the patient to keep the eyes closed. He complains of intense shooting

pains in the head and legs, and especially the back, and hurting "all over." Dizziness is a marked feature, and appears at the onset of the disease. The temperature rapidly rises to around 103 within the first twelve hours, and prostration is marked. The temperature in two or three days begins to drop, and in mild cases may completely disappear except for an afternoon rise. Usually, however, there is gradual remission for two or three days, then the secondary rise of temperature comes on. The pulse is very full and bounding at first, and is said by some to be proportionately slower than in most diseases, with a like degree of fever. After the initial fever subsides, the character of the pulse is rapidly changed, as is the whole physical condition, and a state of asthenia comes on. The appetite is completely lost at the onset of the disease, and may remain so for two weeks after defervescence. The tongue at once commences to take on a moist, creamy coating at the center which gradually extends over the whole organ, which in severe cases, becomes dry and yellowish. Nausea of a very distressing character supervenes in a large percentage of cases, and vomiting during the early part of its course is very common. Vomiting of blood, "black vomit," is seen occasionally, but no cases came under my observation. Nose bleeding is frequent, and when it takes place gives some relief to the severe headache which accompanies the disease. These symptoms gradually subside after the second day, to be followed in two or three days by a secondary rise of temperature which is of short duration, and which frequently is not present at all, or if it is, is so evanescent that it passes unnoticed by the patient. When present it is accompanied by joint pains and other discomforts, which are present at the height of the disease, but of lesser intensity. The rash presents dark, dusky spots, varying much in size and disposition, but not in color. It is seen prominently on the hands, wrists, elbows, knees, face, legs and trunk. It may be patchy, large or

small, papular, or scarlatiniform, but is rarely petechial in nature. The main characteristics of dengue rash have been described as "midway between scarlatina and measles, but less definite." The eruption stays out for two or three days, as a rule, and fades in the same sequence in which it appears. In some instances it may remain visible for two weeks. In a physician, whom I saw, there was evidence of it for three weeks. In another patient whom I saw, there was a large patch of eruption in the center of the chest, which was six inches or more in diameter, and the rest of the body was comparatively free from it.

Desquamation is usually furfuraceous, sometimes, however, it is in large flakes, but never to the extent that it is in scarlet fever. Itching is very often a concomitant of the eruption, and is sometimes most terrifying. It lasts for a few days, then rapidly subsides.

The secondary rise of temperature ends by crisis within a few hours, or a day, and is followed by profuse perspiration. I know of no disease which equals it in the degree of weakness and amount of perspiration. These sweats keep up for several days, and gradually disappear. Insomnia is very common during convalescence, and mental depression is almost always a sequel. Pains of a rheumatoid nature may last for three or four weeks, and come on as severe twinges in a finger, toe, or some other part of the body.

Relapses are rather common, and have been noted as coming on in from two to four weeks after the initial attack. Second and even third attacks during the same epidemic have been reported. As a rule, however, susceptibility to the disease is exhausted by one attack. This immunity does not seem to be lasting, as Hare, in a recent Australian epidemic, reports that the immunity from an attack does not exist beyond one year.

MORTALITY—The mortality from the disease is very low, almost nothing, and seems to be limited to those suffering some

serious chronic disease. The only case which I saw prove fatal, was in the case of an old diabetic. There was another authentic case of death in a diabetic in the city, and so far as I know these were the only two deaths which it caused here, except one with some vague abdominal complaint. The lowering of the vitality strongly predisposes to other and more serious diseases, and indirectly there may have been other deaths.

The number of cases reported on the questionnaire, sent out by me, was approximately two thousand. Complications were noted in only seven cases, as follows: insanity, one; appendicitis, one; peritonsillar abscess, one; otitis media, one; suppurative parotitis, one; septic sore throat, one; and abdominal, with death, one. There is no disease that causes so much suffering, which has so low a rate of mortality as does dengue.

DIAGNOSIS—Diagnosis of dengue is very easily made, when an epidemic exists, and after the eruption has appeared, but it must be recognized that dengue and yellow fever are diseases that are transmitted by the same mosquito, and inhabit the same localities. Ashburn and Craig demonstrated a well marked leukopenia averaging 3,800 with relative increase of the small lymphocytes. This is a diagnostic feature of great importance, as it will serve to differentiate it from any other disease with which it may be confounded. The other disease from which it must be differentiated is typhus fever, Typhus presents a petechial eruption and the Weil-Felix reaction.

The prevention of the disease is one which resolves itself into mosquito eradication, and screening of houses. And if intensively done would greatly minimize suffering and economic loss.

TREATMENT—The treatment is symptomatic, and usually includes such drugs as acetyl-salicylic acid, codein, and purgatives. While the pains are excruciating in character, they are easily controlled by codein and other mild preparations.

IMPORTANCE OF EARLY RECOGNITION AND TREATMENT OF WEAK FEET IN CHILDREN*

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From a study of the anatomy of the foot one may obtain a fairly accurate idea of the ideal aimed at in its structure, and it should be looked upon as an essentially kinetic mechanism, not a static one. The first is composed of many segments and is capable of changing its shape so that support is given to the super-structure now in one way, now in another.

On the outer side of the foot is the hard strong spring, made up of the os calcis, cuboid, 4th. and 5th. metatarsal bones, and strong enough to bear weight about the end of the first year. The chief ligaments concerned are the long and short plantar ligaments, supported by the peroneus longus tendon.

On the inner side of the foot is the elastic long spring, made up of the os calcis, the scaphoid, the three cuneiforms, especially the second and the first three metatarsals, especially the first. The weakest part in this spring is the interval between the os calcis behind and the scaphoid in front. This space is filled by the extremely strong inferior calcaneo-scaphoid ligament which is supported by the tendon of the tibialis posticus. As the osseous structure of this spring is not completed until the end of the fourth year it stands to reason that the greatest strain on this spring falls upon the ligaments, and these ligaments are liable to yield in those children who are overweight, and in such children in whom the ligaments are relaxed because of too early a strain put upon them.

We must appreciate that the foot is a more highly modified organ than the hand, and we must remember that man is the only animal who walks in the erect position, and therefore, the only animal which has an organ of locomotion especially adapted for the erect attitude. The human foot is in a state of active evolution. The

fibular side is tending to undergo evolutionary atrophy, and the tibial side is tending to undergo hypertrophy.

Acquired deformities of the feet due to weight bearing make themselves manifest at any time in childhood beginning from the time the child begins to walk and developing as the years pass by. The normal weight bearing line of strain passes through the knee joint a little to its inner side and through a line represented by the anterior crest of the tibia down through the ankle joint over the dorsum of the foot to the second toe. If, when the foot is functioning, this line of weight bearing strain is in no way interfered with, the result will be a perfectly normal foot, both springs acting physiologically, held in perfect relationship to the leg.

On the other hand, when this normal relationship of the foot to the leg is altered, the foot immediately feels the effect of the body weight strain in the abnormal position, and unless checked up and properly treated will finally result in the development of pronation and subsequently flat feet.

As the foot strain continues and the child adds weight and the tarsal bones continue to develop, and the ligaments remain relaxed, an indefinite aching feeling is complained of in the muscles of the leg. The child is less active than its playmates, lags behind in its regular childhood activities, is much more inclined to sit down than to run about, and the general condition is less robust because of curtailed out-door exercise.

To prevent such deformity from continuing, bear in mind that the internal cuneiform and the scaphoid bones make up the osseous structure and are developed from the 3rd. to the 5th. year, the years of greatest spontaneous activity, and that the greatest strain is born by the calcaneo-scaphoid ligament, the tendon of the tibialis posticus on the inner border and the long and short plantar ligaments, and the tendon of the peroneus longus on the outer border. Correct the foot wear of the child, have the child wear a lace shoe which is broadest across the toe which has a straight

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inner line, and fits snugly over the dorsum of the foot and about the heel. The stocking should be longer than the foot, the ideal stocking having a separate stall for the great toe. Exercises should have for their object the inversion of the entire foot at the ankle and adduction of the forefoot. Special care should be taken to have the feet exercised actively and passively if the child is confined to the bed on account of illness.

If delayed physiological treatment can not check the faulty balance more vigorous correction will then have to be resorted to.

Finally, ligamentous and tendinous spring action is most important to consider during the development of the bones, because these bands retain the shape of the foot, and are responsible for a strong and well shaped foot.

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A CONSIDERATION OF THE KIDNEY FUNCTION*

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In the consideration of the function of the kidney, it is well to have a clear cut conception of the meaning of the caption. Function means duty, so the sense will not be changed if the subject reads a consideration of the duties of the kidneys.

In life we have our wholesome homely duties that make up the round of our daily activities. Further there are extraordinary or emergency duties that may arise once, twice or even more often during our existence. It is not illogical to draw a distinction between these two classes of duties. One may be a hero in battle and measure incompetent in the daily struggle, or one may fail in the emergency and measure four square in his ordinary duties. With the organs this is also true. An organ thoroughly competent for vital purposes may fail through idiosyncrasy in the presence of some foreign chemical element and still be a thoroughly trustworthy organ in its daily function. The real test of a man

or a gland is found in the quiet walks of his daily life. The crises in the lives of both are few and far between. Men do not live by heroics alone. This paper, then, will be devoted to the discussion of the normal function of the kidneys and not to a consideration of their response to foreign elements intentionally introduced into the blood current.

Multiply the pathology of the kidney till you exhaust your technical adjectives, or simplify it till you have three conditions only, to-wit, chronic nephritis with oedema, chronic nephritis without oedema, and the arterio-sclerotic kidney and still you will have to estimate the degree of impairment in the terms of functional incompetence alone. It is not the intention of this paper, nor is it the power of the writer to disparage the wonderful work done in the laboratory in identifying the various structural changes that make up the pathology of the kidney. There is, however, a danger of carrying the consideration so far afield scientifically that the whole question becomes a "No Man's Land of confusing trails to the average practitioner out on the firing line of professional endeavor. In the advanced zone one has no time for academic discussion for it is touch and go with him and with his patient is only too of touch and gone. So simplicity of nomenclature, directness of thought, and clearness of symptomatology are like Manna from Heaven to him.

The excretion of water is the most conspicuous of the kidney's duties. Though the lungs, skin, and bowels share in part of the elimination of water, the bulk of the burden falls on the kidneys. Though this lowly function has been derided, though it has been humourously immortalized in verse by one of the great American poets in his lines devoted to a description of Willie's polyuric propensities during the quiet watches of the night, it has a very decided bearing upon the health of the individual and is prominent in the symptomatology of imperfect kidney action. Retention of fluids in the tissues will have been present for a more or less extended period before there will be such a waterlogging that oedema becomes manifest. A serious re-

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tention of fluid may be masked behind a healthy appearance and a woeful kidney incompetence displayed as an evidence of good living. A normal individual will excrete approximately three pints of urine daily. This varies in disease from a suppression on the one hand to a polyuria of very annoying proportions on the other. Not only has the quantity of voided urine a functional significance but the time during which it is voided has an important bearing. No organ of the body can sustain its efforts indefinitely, much less so can the kidney. It requires its hours of functional rest more insistently than do the heart, the lungs, and the brain. When the demands made for excretion by the metabolism of the body exceed the impaired capacity of the organ, an effort at self-preservation on the part of the body calls upon the kidney to work over-time. In the industrial world about us crises like this are met by calling in extra shifts but unfortunately for us we have only one set of organs. So we can accept the presence of a nykturia or a nocturnal polyuria as an evidence that the tired organs are cleaning up the days work after office hours. As can be readily seen this evidence of faulty function has serious significance and when associated with a fixation of the specific gravity it has a serious prognostic importance.

The reserve of an organ is its capacity to respond to an increased demand for activity. Nothing can be more striking than a heart which has exhausted its reserve, yet though far less dramatic in its exposition of human suffering than the bankrupt heart, a kidney that has suffered similarly is equally as productive of disastrous consequences.

The gravity of the urine shows its solid content and the rise and fall of this gravity is an evidence of the functional elasticity of the organ. In an increase of the metabolism whether it be due to mental, physical, or digestive effort the gravity of the urine should rise, with a cessation of this activity it should fall. So then the gravity in health may be taken as an exponent of the functional response to metabolism. This gravity varies as do the pulse and respiration and as we accept the accelerated pulse rate as an evidence

of increased cardiac effort so must a rising gravity be construed as increased renal activity. In health the degree of variation is approximately ten points. Casting up the ledger at the end of the day the mean specific gravity is normally 1020. It can readily be understood then that any pronounced variation such as abnormally high or low or a fixation means abnormality.

Broadly speaking, the kidney has only two functions, the excretion of water, which we have discussed in a general way, and the excretion of solids to which we referred in our remarks on gravity. The apparatus for the study and interpretation of these functions is in the main very simple. An ordinary graduate is sufficient for the fluid output and any accurate urinometer will give the gravity records, which are an index to the solid output. It is a very simple procedure to measure the water, yet the total will be exact and it is monotonous to read the gravities, still the data will be incontrovertible. In fixation of gravity the kidneys seem to have a functional spasm, that is, tonic in nature, and the specimens will show a practically dead level gravity, no matter what the metabolic effort has stored in the blood.

Many have been the "short cut" methods of determining the functional activity of the kidneys. These have consisted in the injection of substances into the body that are uninfluenced and unchanged by the action of the body fluids and pass from the kidneys as they were introduced. Each in its day has enjoyed its celebrity only to be replaced by a new child of an equally ingenious mind. The one that seems to have lasted longest and be it said to its credit, still has a following of minds that can't but command respect, is phthalein. When the test works out "good it is very good indeed," but then at other times the results are not so encouraging to say the least. The question that naturally suggests itself to one is why the necessity for these short cuts. If a thing is worth doing it is worth doing well. If the function of one of the vital organs is worth investigating it is worthy a more thorough examination than is possible with these "short cuts to functional

determination!" In the second place the practice is not founded on a sound basis. The handling of an aniline dye is not one of the functions of the kidney. Phthalein is not a product of body metabolism, and what can be the direct good of getting the phthalein output. You can only reason by analogy from the data given. And in the presence of personal idiosyncrasy your conclusions are open to great range of error. Then again why go to an unnecessary method of examination when we have the functions we wish to study before us. If we wish to study the fluid output, there it is right before us. If we wish to solve the problems in the total solids, all the data are forth coming for a thorough examination and an incontrovertible conclusion. The pendulum of public approval seems to be swinging away from the phthalein test in the literature of the last few months. Folin straddles the question in his statement that phthalein indicates the function for the instant but one must go to blood chemistry in determining the working power of the kidney. Foster states that patients dying of uremia showed a high Phthalein output. Christian finds the phthalein excretion practically normal in the early nephritis stages and Hill found a seventy per cent output in severe renal damage of chronic nephritis. So we see it is unreliable in uremia, it is misleading in the early stages of nephritis, it fails utterly in the severe renal damage of chronic nephritis. Its glory has departed. Alas, poor phthalein, it was our Urologists' jester. It is just as fair to judge one's manhood by the amount of artillery punch he can carry as it is to judge the renal function by the amount of phthalein it can carry. Measure the amount of urine passed in the twenty-four hours, study the gravities of the various specimens, compute the amount of salt and nitrogen passed and you will have truer and more reliable data for your conclusions than can be obtained from the kaleidoscopic changes of any colorimeter, where the ultimate determination is a matter of one's color sense.

In the study of the solid content of the urine, the first step is the determination of this solid content. The total solids may be

estimated for all clinical purposes by multiplying the last two figures of the mean gravity by 2.33 and this will give the total solids in 1000 cc. The computation of total for twenty-four hours is then a matter of simple arithmetic. The absolute total solids can only be estimated in the laboratory through the tedious process of drying and weighing.

There has been a division of the contents of the urine included in the solid matter with regard to the so-called threshold. There are certain substances that are eliminated from the blood down to a certain level. Sodium chlorid is an instance of this class and the level below which the salt does not descend is called the threshold. There are other substances such as urea that will be entirely eliminated. Urea, ammonia, and uric acid have no threshold. So in the estimation of the solids in the urine we choose sodium chlorid as an exponent of the threshold group and in the other group urea occupying a position between uric acid and creatinin is chosen. An anomalous function of the kidneys is their ability to excrete an acid sodium phosphate from an alkaline blood. To recapitulate the kidneys excrete water, sodium chlorid and urea. The other substances thrown off are so related to these that the function with regard to the exponent holds good for the whole class.

There are various methods of procedure in the study of the kidney functions all having their points of advantage and their adherents. In our hands the so-called two hour method has been amply sufficient for all needs. The urine is voided every two hours from 6:00 a.m. till 10:00 p.m., the specimens collected in separate containers and the labels bear the hour and date of passage. Such specimens as are passed between 10:00 p.m. and 6:00 a.m., are gathered in the same manner. Thus the entire twenty-four hour quantity is collected at definite periods and with these before you the renal activity for that period may be studied. By chemical analysis of a twenty-four hour specimen albumin or sugar will be detected more certainly than by a single specimen. Lastly a specimen may be centrifuged for such data as the microscope may reveal in the sediment.

In the estimation of the sodium chloride and of the nitrogen the apparatus is inexpensive and the details of the process are simple, requiring little time for the computation. The sodium chloride determination is based upon the breaking down of a standard silver nitrate solution in the presence of the sodium chloride in the specimen of urine that is charged with a solution of potassium chromate. The end result is a formation of silver chromate which gives a pink color to the solution when the last of the salt has been decomposed.

The nitrogen in the urea is determined by the Urease method. A description of the method is furnished with the apparatus. These tests do not take a great deal of time nor do they require a great degree of technical skill yet they do give direct evidence.

The nocturnal polyuria which is so evident by this method, is an early sign of renal impairment. Though it is often present without any prostatic involvement there is no reason why the two conditions should not exist synchronously. With the polyuria a fixation of the gravity at either a too high or too low level is a symptom of too grave importance to be passed without comment.

In organic disease of the kidney the evidence of change is very elusive, and the reserve of the organ must be impaired before the condition will force itself upon the consciousness of the patient by its symptomatic demonstration. You will find a decided disturbance in the elimination of water, salt and nitrogen before distress drives the patient to his physician for relief.

Mrs. F. S. voided between the hours of 9:00 a.m. one day and the same hour on the succeeding day 1920 cc. of urine. Of this quantity 950 cc. was passed during the day and 970 cc. during the night. The nocturnal polyuria is marked. The highest gravity of any specimen of this urine was 1015, five below the normal mean. The next highest was 1010 and from this it drops to 1005 in four specimens and to 1000 in the remaining five. The total solids were only 17.89 gms., and total urea 7.68 gms. Total salt not observed.

Mrs. I., 4055 cc. in the twenty-four hours.

Of this quantity 1300 cc. were voided during the night. The highest gravity was 1010 reached in three specimens, the next highest gravity was 1006 in one specimen only and the remaining five specimens had a gravity of 1005 with a mean gravity of 1007. Her total solids 58.02 gms., she could have excreted 106.7 gms. The total urea was 12.16 gms., it should have been 48.5 gms. This patient had drunken an abnormal amount of water in her effort to help her kidneys, yet in a twenty-four hour test this would not vitiate results.

The appeal of this paper then would be for a clearer conception of the importance of this functional study and a closer attention to the daily life of these organs, for as the Bible says, "By their fruits, ye shall know them."

NEW GERMICIDES AND ANTI-SEPTICS USED IN URETHRO-VESICAL IRRIGATION*

J. T. Stukes, M.D.

Americus, Ga.

The object of this paper is to discuss only a few of the many preparations classified as germicides and anti-septics useful in treating disease of the urinary tract. Drugs that have been introduced during the past several years and that have been and are now being investigated by those engaged in research laboratories and in experimental work in large clinics. I hope my colleagues will discuss and criticize this paper and contribute all knowledge of the subject gained through experience with these remedies.

Drugs used in the urinary tract are selected for the following quality: Germicidal or antiseptic in strength that will not irritate or cause tissue destruction. Diffusibility or power to penetrate. Cleansing effect or washing away the inflammatory exudate. Stimulating action, that is, improving phagocytosis and granulation. Sedative properties which alleviate the pain and local congestion. Stability in presence of albuminous material. Chemotactic effect, that is, affinity for certain organisms. All of these qualities are not found combined in any one medicine that we possess.

The treatment must be suitable for the pathological condition that exists, otherwise the treatment will be unsuccessful. Laboratories in Europe and the large clinics of that continent have very extensively investigated the aniline dyes.

Based on the fact that they stain and are highly toxic to pathogenic organisms but less injurious to the human cell, acriflavine is a product of aniline dyes and has the following properties: It is not impaired by addition of serum; does not coagulate protein substances; inhibits the gonococcus at a dilution of 1-300000. High dilutions, something like 1-100000 inhibits the growth of the colon bacillus, and the staphylococcus aureus in an alkaline urine. In an acid urine the staphylococcus is not nearly as easily killed, whereas the colon bacillus in acid urine requires an exposure to a solution not less than 1-5000; this drug is highly diffusible and penetrates ducts and to some extent through the mucosa, but claims for deep penetration with germicidal power through the mucosa have certainly been exaggerated. When this drug was first introduced the strong solution one to 500 was used by instillation and injection in all stages of urethritis with the claim that it was not irritating. But some cases are irritated and long after the gonococcus has disappeared from the discharge a mucopurulent or seromucinous discharge may persist. Irrigation by weak solutions 1-8000, 1-10000 in acute specific urethritis, increasing the strength in sub-acute and chronic stages 1-4000 and 1 to 2000. This treatment will save many cases from a posterior infection and there will be many cases to get rid of the organisms in the first and second week, and if a mucoid discharge persists, discontinue the drug for nitrate of silver or one of the silver compounds or astringents. Some urologists have obtained excellent results while others with equal reputation for ability have entirely abandoned this preparation. On account of low toxicity, neutral acriflavine is injected in vein and given by the mouth to produce antiseptic urine, and it may be given in large doses 200 c.c. of a 1-1000 solution. A Euro-

pean urologist reports giving 300 c.c. of 1-1000 solution in the vein, making the blood an antiseptic stream without toxic symptoms and striking effect on the disease. I have no experience with these large doses, nor have I heard of a case of poisoning. This use of acriflavine is still experimental.

At the Brady Urological Institute, a treated rabbit secreted antiseptic urine, after receiving 10 to 25 mgms. injected; also took 50 mgms. by mouth with no toxic symptoms. But 50 mgms. injected in a vein caused the death of the rabbit several days later. The state should give criminals to her universities so that just such questions may be determined. Explanation of failure of antiseptic urine to destroy organisms in its path is explained by the fact that these micro-organisms require a time exposure to solution of germicidal strength and they are securely ensconced in the glands. Hexamethylenimine has a new and wider field since it is given in the vein: one or two grams may be injected in the vein without symptoms and producing antiseptic urine, that is, if the fluid has enough hydrogen ion to make it acid or neutral. It should be borne in mind that in urgent cases for prompt effect, the vein should be the method of administration, and that retention of urine in surgical and parturition cases is often permanently relieved by one or more injections. This is probably due to the action of the formaldehyde on the musculature of the bladder. Ten grains acid sodium phosphate three or four times a day is regarded as the best method to acidify urine and maybe used in connection with hexamethylenimine. This latter drug I keep 1.5 grams in 5 c.c. sol. ampule for intravenous injection.

Mercurochrome 220, a dye product, in combination with mercury introduced several years ago is used extensively in the urinary tract and has high germicidal power, low toxicity, is non-irritating and penetrating. When first prepared, it was alkali soluble and somewhat irritating; later it was made a water soluble compound, and now in strong germicidal strength it is less irritating. Mercurochrome is particularly effective against the colon bacillus 1-800,

one minute in urine. In acute specific and non-specific urethritis, I consider mercurochrome has a good record, but not a brilliant one. It will not make as many speedy cures as acriflavine but I believe it is more effective than permanganate of potash. In sub-acute and chronic urethritis I give it preference over acriflavine and permanganate and rank it with nitrate of silver. In chronic posterior urethritis and cystitis, it is particularly effective after dilatation. Dilatation of posterior urethra and trigone in cystitis of either sex, followed by thorough bladder rinsing with salt or boric acid solution; then 5 grs. mercurochrome dissolved in one or two ounces of warm sterile water injected into the bladder and retained for several hours until the next urination. It may be found necessary in painful cases to give morphine or morphine and hyoscine hypodermically. This treatment with internal urinary antiseptics and appropriate regulation of the reaction of the urine is remarkably effective, especially in colon bacillus and colon mixed cystitis.

A failure to cure in cases that do not have residual urine from prostatic disease suspect disease above the bladder or infection that comes from prostate or vesicles. In chronic disease of these organs, after massage and bladder rising, I inject by gravity 5 grs. of mercurochrome dissolved in two ounces of water in the bladder to be retained. On account of the objectionable staining properties, acriflavine and mercurochrome are better adapted to use in the doctor's office. I regard acriflavine effective in early stages of urethritis, irrigating with about 1-8000, increasing the strength progressively but cautiously to 1-2000, and after the gonococcus has disappeared I prefer mercurochrome or nitrate of silver, latter drug should be used in solution with distilled water. These drugs are very effective in chronic posterior disease in connection with appropriate instrumentation. It is important to bear in mind that any drug in strong solution is capable of traumatising the urethra and cause a rapid extension backward. It is better to be conservative and stick to the weak cleansing solutions and trust to

the anti-bodies in the blood rather than employ too strong a solution in the early stage of urethritis and thereby commit irreparable damage. I would rather be treated locally and internally with water than commit this mistake.

Mercurophen, introduced by Dr. Schamburg and his associates, has also made a good record for speedily banishing the gonococcus from the urethra and is also effective against secondary organisms. Vein infusion of various mercury preparations based on chemotherapeutic effect as are collargol and other silver compounds, have been and are now being tried. Following argyrol we have albargin, cargentos, silvol and neosilvol. These organic silver compounds have rather feeble germicidal power, do not penetrate deeply and precipitate proteins, but cause a moderate hyperaemia and serous exudate, which is cleansing and aids the tissues in expelling the organisms, stimulate active phagocytosis and are astringent. This astringent effect is sometimes beneficial all that is needed to complete a cure. Again an astringent may be distinctly detrimental by retarding the discharge of the organisms. Acriflavine, mercurochrome, neosilvol, representing the silver compounds without the staining properties, must be regarded as distinct advances in the therapeutics of infections of the urinary tract. In spite of internal antiseptics, strong germicides that may be used locally, intelligent use of sounds, dilators and the urethroscope, the gonococcus and his associates are still unvanquished—we have no panacea.

DISCUSSION OF THE PAPER OF DR. J. T. STUKES

Dr. H. Y. Righton, Savannah.—There is only one thing I might add to what Dr. Stukes has already said. With all these stains you can increase the efficiency of the drug by heat. I think really you have a more penetrating effect if you increase the temperature of the injection.

Acriflavine has its special virtue as a urethral antiseptic as well as bladder antiseptic, but in my hands I find mercurochrome is a better drug. It can be used with positive effect. He says that fifty per cent. of the drug can be used. I feel that every patient has different powers to with-

stand the drug, and in my hands some patients will tolerate acriflavine very well; they will take more than 500 without any irritating effect, while another patient will tolerate 1/2000. The same thing may be said with reference to mercurochrome. These drugs are considered of value when you are following the work with the microscope, and the cocci, the staphylococci, and gonococci depend entirely on the microscope.

Dr. J. T. Stukes, Americus, (closing)—In regard to the irritation acriflavine produces, it has been proven that those who have used it in weaker solution than 1-500 have had less trouble with secondary infections and secondary organisms. After the gonococcus disappears, and secondary organisms are persistent, and better results have been obtained by those who have used the weaker solution.

EPINEPHRIN AND THE REVIVAL OF THE HEART.

The widespread interest with reference to the use of epinephrin as a life-saving drug, because of its apparent power to revivify the human heart under certain untoward conditions is a natural consequence of some of the publicity that the subject has received. There is something uniquely dramatic in the response of a heart, which has apparently ceased its action, under unexpected circumstances. It presents the possibility of successful restoration of life when death seems already to have been ushered in. Thus, the fear of the end may become replaced by the hope of survival in many instances in which untoward conditions presage the interruption of life through failure of the circulation. The outstanding facts in regard to what has actually been accomplished in an experimental way and has been reported from clinical sources were reviewed in a recent issue of *THE JOURNAL*.^{*} They stress the long known observation that a heart which has ceased to beat may often be revived by the injection of epinephrin; and when this is done with the circulation still intact, a renewal of the flow of blood may ensue, with consequent restitution of tissue functions.

In almost all of the discussions on this subject, certain aspects of fundamental importance seem to have been overlooked or forgotten. It is one thing to promote restoration of contraction in a quiescent cardiac muscle and quite another problem to secure

restitution of function in the organism as a whole—even when the entire circulation and the respiratory activities are satisfactorily established. The foremost reason for this seeming contradiction lies in the now well established consequences of lack of circulation in different organs and tissues. All of them are sure to suffer severely sooner or later from the anoxemia due to an interrupted circulation. Some structures, however, are damaged far more easily than others in this respect. Above all is the high susceptibility of the nervous tissues to permanent damage as a result of even temporary deprivation of oxygen.—*Jour. A. M. A.*, June 23, 1923.

^{*}The Intracardiac Injection of Epinephrin, editorial, *J. A. M. A.* 80:1314 (May 5) 1923.

A SUMMARY OF OUR KNOWLEDGE OF RICKETS

Following the close of the war, information began to reach London that rickets was extremely prevalent in Vienna as a result of deficiency in diet. The Medical Research Council, which had been carrying on special investigations of this disease, appointed a committee to carry on investigations in Vienna jointly with the Accessory Food Products Committee. As is pointed out in the report just issued, the problem of the cause of rickets is approaching solution. In his foreword to the present report, Professor Pirquet states that he himself believed that rickets was of an infectious origin, but following their three years of conscientious work, he now has been convinced that the disease is definitely associated with a diet poor in fat soluble vitamins and with the absence of sunlight. The British workers, he says, succeeded with the accuracy of a laboratory experiment in maintaining a large number of artificially fed babies free from the disease, and, further, were invariably successful in healing children with rickets already developed. This extensive clinical investigation completes the final establishment of views regarding the cause and therapy of rickets which mark an epoch in the control of this disease.—*Jour. A. M. A.*, June 23, 1923.

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

FEE-SPLITTING.

To the Editor:

"About two weeks ago I took a friend and patient of mine to Dr. — of — for treatment of what I considered a very serious condition. Fortunately he stood the operation well and is apparently on the road to recovery. This morning I received an envelope containing a check for \$ — from the physician to whom I took my patient. Now I have lived and practiced medicine in this county for nearly half a century and this is my first experience of this kind. My accumulation of worldly goods is not great but I feel that I am rich in the hearts and minds of my patients and friends. My mistakes and shortcomings have weighed heavily on my shoulders but the 'greed for gold' is not among the many sins that I shall soon be called upon to answer. What must I do? I have never knowingly hurt the feelings of a brother doctor. Of course, I know I am a little out of date—some would call me an 'old fogey,' but is this the end of my experience in the profession I entered as a Crusader—the profession I considered then and still consider the noblest of them all?"

The above needs little comment. How long will "money changers in the Temple" be tolerated? How long?

COMMUNICATION FROM OUR PRESIDENT

To the Editor:

The matter of Post Graduate Clinics being assured in Georgia for the coming year is very gratifying. Augusta, Atlanta, Macon, Columbus and Savannah have agreed to give clinics that will be devoted to practical things that can be done by the visiting physician when he returns home. The scheme is that in each city clinics are to be held for six consecutive days. Each day being devoted to a special subject, thus enabling visiting doctors to select their subjects, attend the clinic and return home that night. If interested in all subjects he may remain throughout the six days.

Special stress is to be laid on diseases of the chest, so as to thoroughly drill into the visitors the physical findings in early tuberculosis. Groups will be taken with a series of cases for demonstration—normal and pathological. The chest will be bared and studied from every angle of diagnosis, and comparisons made between the normal and the abnormal. Then each visiting physician will be given a case to go over and demonstrate before the group. In this way we hope to familiarize them with the various rales, breath sounds, etc., and their significance.

The same procedure will be taken up in diseases of the heart. The surgeon will demonstrate the care of wounds of the extremities, fractures, sprains, burns, etc.,. Serious consideration will be given to obstetrical technique with the after care of mother and infant. By this means we hope to bring the profession of Georgia up to high standard of efficiency.

The clinics are to be open to all members of the Medical Association of Georgia free of charge. Preparations are now under way for the opening of these clinics and due notice will be given of dates and schedules. It is hoped that a majority of the physicians of Georgia will attend.

Also we have undertaken to put Georgia where she rightfully belongs—the Empire State of the South. We have slipped of late years—not due to any fault of our Health Department, but to the small appropriations that have been made by the Legislature for Public Health Work. The men of affairs, our big industries, our bankers, and business men realize that the trouble is one of health conditions. Realizing this they are now uniting to get behind the State Board of Health and The Medical Association of Georgia, and aid us in every way to put a stop to the increase of preventable diseases in Georgia.

Your President has interviewed the heads of a majority of our large corporations, banks, mercantile establishments, as well as spoken before the various Civic Clubs of Savannah, and in each case the work outlined has been endorsed. The Savannah Board of Trade will consider the matter at an early date with a view of calling for a meeting in Savannah of delegates from the various clubs, boards of trade, banks, railroads, etc., to plan a permanent organization to promote public health in Georgia, under the direction of the Medical Association of Georgia working with the State Board of Health.

Concrete plans for carrying out the undertaking will be presented later. It is hoped that every doctor in Georgia will join in this movement and do his part toward putting Georgia back at the head of the States of the South. It is a matter entirely up to the medical men, and we must be equal to it. We owe it to our state and country. If we succeed we will go a long way toward putting the medical profession where it rightfully belongs; we will give to the country an example of unselfish work done without hope of reward other than the welfare of our fellow man and the upbuilding of our state and nation.

I will gladly receive and solicit suggestions on how this work can best be done. During the World War the Medical profession gave to the world an example of unselfish love for country and fellow man. LET'S DO IT AGAIN.

Yours truly,

J. W. DANIEL,

President Medical Association of Georgia.

MEDICAL WOMEN'S NATIONAL ASSOCIATION

The Ninth Annual Meeting of the Women's National Association was held in San Francisco, June 25 and 26, in conjunction with the American Association Meetings, Dr. Grace N. Kimball, President; Dr. Kate Campbell Mead, President-Elect. At the open session, Monday evening, Dr. Ray Lyman Wilbur, President-Elect of the A.M.A., delivered an eloquent and inspiring address on the Power of the Minority.

At the open session, Tuesday morning, a Five Year Program was presented by the Executive Committee and Council, and was adopted. This program is under five heads:

1. Continuation of the work of the Committee on Medical Service, American Women's Hospitals; Dr. Esther P. Lovejoy, Chairman, 637 Madison Ave., New York.

2. Federation of Medical Women's Organizations with the Medical Women's National Association, under Organization Committee; Gertrude A. Walker, Chairman, Whitfield, N. H.

3. Public Health, co-operating with A.M.A. Council on Health and Public Instruction, Hygiene, and Women's Foundation for Health, etc., Dr. Elizabeth B. Thelberg, Chairman, Vassar College, Poughkeepsie, N. Y.

4. Committee for Medical Opportunities for Women, Dr. Sue Radeliff, Chairman, 21 Morris St., Yonkers, N. Y. Internships for young Graduates—Members of the M.W.N.A., in Hospitals conducted by the American Women's Hospitals; in Missionary Hospitals and in Hospitals in U. S. A., as well as opportunities for private practice, Service on Boards of Health, Government appointments, etc.

5. Publicity for the Medical Women's National Association through the Bulletin and an Editorial staff, consisting of the President and Executive Committee, President-Elect and an Editor-in-Chief. Dr. Grace N. Kimball, Poughkeepsie, N. Y., was appointed Editor-in-Chief.

The Bulletin, which was published quarterly last year, will be continued as the Of-

ficial Organ of the Association and sent to all Members of the M.W.N.A.

An Amendment to the Constitution was passed, providing for Group Membership. This was in response to proposals for Federation made last year by certain State societies of Medical Women.

Under the Group Membership Amendment, organizations of women whose basis of membership conforms to that of the M.W.N.A., viz: membership in the A.M.A., may join the National as group members: Kansas State Medical Women's Society, New York State Medical Women's Society, Connecticut State Medical Women's Society, Portland, Oregon State Medical Women's Club affiliated through their representatives at the San Francisco meeting.

The Nebraska, Los Angeles and New England Medical Women's Societies signified their desire to take action regarding affiliation.

The M.W.N.A. had a most interesting exhibit. Booth E. of A.M.A., Scientific and Educational Exhibits, showing the work of the American Women's Hospitals in Greece and Serbia. Twenty hospitals and a large number of Dispensaries are being run by this Committee of the M.W.N.A. in Greece alone, under the Directorship of Dr. Mabel Elliott, New York Headquarters, 637 Madison Ave., New York; Dr. Esther P. Lovejoy, Executive Secretary.

Four periods on the A.M.A. moving picture theater were assigned to the National—a film of work in Greece, Crete and the quarantine work on Macronessi Islands, shown by Dr. Esther Lovejoy; and slides of hospital and surgical work in Serbia, under Dr. Etta Gray.

Dr. Kate Campbell Mead, of Middletown, Conn., was installed as President. Dr. Katherine C. Manion, of Port Huron, Mich., was chosen President-Elect.

The following officers and Councilors were elected: First Vice President, Dr. Martha Welpton, San Diego; Second Vice President, Dr. Marjory J. Potter, San Diego; Third Vice President, Dr. Florence W. Duckering, Boston, Mass.; Secretary, Dr. Jessie W. Fisher, Middleton, Conn.; Treasurer, Dr. L.

Rosa H. Gantt, Spartanburg, S. C.

The 1924 Annual Meeting of the Medical Women's National Association will be held in Chicago, Ill.

CONGRESS ON INTERNAL MEDICINE

At the Seventh Annual Clinical Congress on Internal Medicine, held at Philadelphia, the following officers were elected:

American Congress—President, Dr. Elsworth S. Smith, St. Louis, Mo.; First Vice-President, Dr. Edward J. G. Beardsley, Philadelphia, Pa.; Second Vice-President, Dr. William Carpenter Mac Carty, Rochester, Minn.; Treasurer—Dr. Clement R. Jones, Pittsburgh, Pa.; Secretary-General—Dr. Frank Smithies, Chicago.

American College—President, Dr. Harlow Brooks, New York, N. Y.; First Vice President, Dr. Jabez Henry Elliott, Toronto, Ont.; Second Vice President, Dr. Aldred Scott Warthin, Ann Arbor, Mich.; Treasurer, Dr. Clement R. Jones, Pittsburgh, Pa.; Secretary-General, Dr. Frank Smithies, Chicago.

Regents of the College—1. James M. Anders, Philadelphia, Pa.; 2. Henry Plummer, Rochester, Minn.; 3. Lewellys F. Barker, Baltimore, Md.; 4. Sidney R. Miller, Baltimore, Md.; 5. F. M. Pottenger, Monrovia, Cal.; 6. John A. Lichty, Pittsburgh, Pa.; 7. Franklin W. White, Boston, Mass.; 8. Alfred Stengel, Philadelphia, Pa.; 9. Leonard M. Murray, Toronto, Ont.; 10. John Phillips, Cleveland, Ohio; 11. Josiah Hall, Denver, Colo.; 12. Frederick Tice, Chicago, Ill.; 13. E. R. Stitt, Washington, D. C.; 14. William Chestnut, Winnipeg, Man.; 15. Stewart R. Roberts, Atlanta, Ga.

The next Congress on Internal Medicine will be held at St. Louis in the early Spring, 1924. Make your plans to attend now.

Respectfully submitted,

Frank Smithies, M.D.,

Secretary-General.

AN APPEAL FOR INFORMATION ON MATERNAL WELFARE.

The Committee on Maternal Welfare of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons is anxious to procure accurate information as

to the progress which each State is making in the matter of Maternal Welfare in order to formulate a report for our annual meeting in Philadelphia, in September.

A preliminary programme was published in the issue of the American Journal of Obstetrics and Gynecology for June, 1923, which it is hoped may be a suggestion of an outline for National work among all organizations which have a common basic line of endeavor including Medical Societies, Departments of Health, and Commissions of Social Workers.

We shall be under many obligations if you will be kind enough to send at your early convenience a brief synopsis of the results accomplished in your State and most important if possible a contrast of the record of the clinics or regions where patients have been privileged to have pre-natal care with the statistics of the community in general where no supervision has been afforded the prospective mothers.

These it is planned to have incorporated into the completed survey to be presented to the Association and to be published in the Annual Transactions later on.

Dr. Henry Schwarz, St. Louis.

Dr. George W. Kosmak, New York City.
Dr. George Clark Mosher, Chairman, Kansas City.

NEWS ITEMS.

Dr. John A. Rhodes, of Crawfordville, has been named a member of the State Board of Health to replace Dr. Doughty, who died recently.

The Railway Surgeons Association of Georgia held its annual meeting for 1923 in Atlanta, August 15th.

There is to be an extensive campaign for the control of cancer in the southeastern states, January 15th to February 14, 1924. These states are Louisiana, Mississippi, Tennessee, Alabama, Georgia, Florida, North Carolina, South Carolina, Virginia.

At a meeting of the Bibb County Medical Society, Dr. John W. Daniel's plan of conducting post-graduate clinics in the four larger cities of Georgia was brought before the Society and passed on favorably.

Dr. H. N. Page, of the Savannah Valley Clinic, Augusta, Ga., has been appointed Chief Surgeon of the Charleston and Western Carolina Railway Co.

The following officers were elected at the annual meeting of the Ga. Railway Surgeons, which was held June 6th, at Macon, Ga.: Pres., Dr. A. H. Hilsman, Albany, Ga.; 1st Vice Pres., Dr. J. G. Dean, Dawson, Ga.; 2nd Vice Pres., Dr. G. B. Smith, Rome, Ga.; Sec'y. and Treas., Miss Baker, Savannah, Ga.

At the annual convention of the County Commissioners at Americus, the Association of the County Physicians of the State of Ga. was organized. Their purpose is to bring about a closer relationship between the County Commissioners of the state and the commissioned physicians and to form a line of professional communication between the County physicians of the Counties of the State.

Dr. J. M. Kirby, graduate of the class of 1922, of Emory University Medical School and for twelve months house physician of Grady Hospital, has left for an extended tour of Europe and Asia. He will take up a post-graduate study in Vienna on physical diagnosis.

Dr. H. L. Akridge, health commissioner of Mitchell County, has resigned to accept a similar position with Glenn County. Dr. C. O. Rainey, of Camilla, was elected in his place.

A free clinic in Savannah for the treatment of indigent cases of diabetes is underway by the Civitan Club, of which Dr. John W. Daniel is president.

As a memorial to the late Dr. Fox, an enclosed porch for convalescents at the city hospital, Brunswick, Ga., is to be built.

The Sycamore Hospital, Sycamore, Ga., has been reorganized under the name of the Turner County Hospital. The new hospital will be larger and better equipped than the old one.

Plans for the erection of the John D. Archbold Memorial Hospital at Thomasville, Ga., are well under way, having been submitted to the architects.

Dr. Theo. Toepel, of Atlanta, was elected president of the Ga. State Council of Health at a meeting held at Macon, July 7th.

Dr. John W. Daniel, President of the State Association, was in Atlanta, July 5th, conferring with the Committee on Policy and Legislation of the State Association.

Senator W. D. Kennedy, of the 49th district, a practicing physician of Metter, Ga., introduced a bill in the Senate providing that all men of Ga. should present a certificate showing them to be free of social disease before being issued marriage license.

Friends of Dr. J. E. Wright, Cairo, Ga., will be interested to learn that on account of his health he has located in the mountains of Texas, at Fort Davis.

Dr. E. T. Gibbs has returned to Gainesville, Ga., after having been in Boston for six weeks taking Dr. Cabot's diagnosis course.

Dr. Beecher DuVall is in New York taking a special course in diseases of the rectum and colon. Dr. DuVall will return to his offices at 20 E. Linden Ave., Atlanta, the latter part of the summer to do this line of work.

Dr. Lisle B. Robinson has moved his offices from 20 Ponce de Leon Ave., Atlanta, to 20 E. Linden St., Atlanta, Ga.

The Jefferson County Medical Association was organized at a meeting at Louisville, Ga., June 22, 1923, naming Dr. J. J. Pilcher,

Wrens, Ga., president and Dr. W. B. Jordan, Bartow, Ga., secretary.

At a reorganization meeting of the Wilkes County Medical Society held June 19th, the following officers were elected: Pres., Dr. L. B. Casteel, Metasville, Ga.; vice Pres., Dr. C. E. Wills; Sec'y and Treas., Dr. A. W. Simpson.

The 23rd annual session of the Chattahoochee Valley Medical and Surgical Association was held at Warm Springs, Ga., July 10-11, 1923.

At the semi-annual meeting of the 12th District Medical Society in Vienna, June 13, the following officers were elected: Pres., Dr. W. A. Rivers, Glenwood, Ga.; 1st Vice Pres., Dr. J. H. Duggan, Irvington, Ga.; 2nd Vice Pres., Dr. I. E. Aaron, Lyons, Ga.; Sec'y. and Treas., Dr. T. J. Blackshear.

At a very enthusiastic meeting of the LaGrange Medical Society, June 21, 1923, at LaGrange, Dr. Emory R. Park was made president, succeeding Dr. H. R. Slack.

DEATHS

Dr. William H. Doughty, Jr., Augusta, Ga., one of the most prominent men of medicine in Ga., and the southeast, died after several weeks illness, July 22, 1923.

Dr. M. B. Hutchins, one of Atlanta's most prominent physicians, died July 6, 1923, after a short illness.

Dr. James W. Lambert, 76 years of age, a prominent physician of Luthersville, Ga., died at his home June 17, 1923.

Dr. John Alvin Alley, 51 years of age, and one of Atlanta's best known physicians, died at his residence 220 Ponce de Leon Ave., Atlanta, following an illness of more than a month, July 3, 1923.

Dr. J. H. Griffin, of Armuchee, widely known Floyd County physician, died in Emory University Hospital, June 27, 1923.

Dr. W. L. Sykes, 72 years of age, died at his home in Sylvester, Ga., June 26, 1923, after a long illness. Dr. Sykes had the reputation of having practiced medicine longer than any other physician in Worth County.

Dr. Thomas R. Wright, prominent Augusta physician, founder of the Margaret Wright Hospital and one of the best known medical men of the state, died at his home in Augusta, May 25, 1923.

FOOD FOR THOUGHT

Dr. Edson W. Glidden, superintendent of Alto Sanatorium (this institution being the only contribution the State of Georgia has made toward alleviating tuberculosis in this State) made the following interesting statement in part:

"For every tubercular white, there are three tubercular negroes, and you know that nearly every white family in Georgia is brought into contact with the negro, who enters our homes as kitchen, laundry and personal servants—and more important than this even is our nursery servant. Don't forget that tuberculosis infection takes place in childhood in nearly every case.

"There is no color line drawn by the tubercle bacilli. You cannot legislate the selection of the victim. The state never can cope with the tuberculosis problem if she refuses to provide greater facilities for the treatment of both whites and blacks. Public health programs that do not take the negro into consideration die aborning."

Dr. Spencer A. Folsom announces the opening of his offices in Suite, 807-809 Hurt Building, Atlanta, giving special attention to Internal Medicine.

Present plans call for completion of the annex to the United States Marine hospital by November or December. The cost will be about \$115,000.

Dr. A. F. Weathers, Member of the Randolph County Medical Society has moved from Shellman, Ga., to Albany Ga.

REPORT OF DELEGATES TO A. M. A. FOR 1922*

W. C. Lyle, M.D.,
Atlanta, Ga.

The last meeting of the A.M.A. was largely attended, having been exceeded by only two other meetings, both at Chicago. The registration was 5128.

The House of Delegates did an enormous amount of work and many important problems were discussed. The question of a Legislative Bureau was referred to the Board of Trustees. Such Bureau is now being organized with a full time paid secretary. It is supposed to co-operate with the legislative committees of the different states as to all legislation pertaining to medical matters and to furnish information to every one interested in such legislation. It is also to have charge of all national legislative interests.

The following resolution was adopted: The American Medical Association hereby declares its opposition to all forms of State Medicine because of the ultimate harm that would come thereby. "State Medicine" is hereby defined for the purpose of this resolution to be any form of medical treatment provided, conducted, controlled or subsidized by the Federal or State government or municipality, excepting such services as is provided by the Army, Navy or Public Health Service and that which is necessary for the control of communicable diseases, the treatment of mental disease, the treatment of the indigent sick and such other service as may be approved by and administered under the direction of or by a local County Medical Society, and not approved by the State Medical Society of which it is a component part.

Another resolution adopted providing for a public health journal reads as follows:

Whereas, There exists an acute need of a lay or a public health journal authoritative in character, a connecting link between the profession and the public, dealing with preventive medicine, hygiene, sanitation and communicable diseases, in brief, to enlighten

*Report presented to the House of Delegates at the meeting of the Medical Association of Georgia, Savannah, May 2-4, 1923.

the public as to what scientific medicine is doing, also its efforts to protect the public against quacks, charlatans and ill advised medical laws; therefore be it

Resolved, That the Board of Trustees be urged to take immediate steps to develop an efficient plan of lay publicity.

Another resolution passed deals with medical ethics and reads as follows:

To cover group medicine, Article I, Chapter II, Section 4, of the Principles of Medical Ethics was amended to read as follows:

Solicitation of patients by physicians as individuals; or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and specially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary single business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients.

Another resolution protesting against ex-service men being sent to chiropractic schools reads as follows:

Whereas, The St. Louis Medical Society on May 16, 1922, by memorial and resolutions vigorously protested against the approval by the U. S. Government of the School of Chiropractic as a means of vocational training for disabled ex-service men, and

Whereas, It appears that more than 250 ex-service men from all parts of the country, seventy of whom represented the Ninth District, composing the states of Missouri, Iowa, Kansas and Nebraska, are now enrolled in one Chiropractic School in this District, with the sanction and approval of the U. S. Government; therefore, be it

Resolved, That the House of Delegates of the American Medical Association, in annual session assembled, adequately trained in the arts and sciences (the only foundation for the recognition, control and prevention of disease), approves the sentiments expressed in the memorial and resolutions adopted by the St. Louis Medical Society, which have been submitted to this House and hereby directs that the proper officers of the American Medical Association memorialize and petition the Federal government, particularly those officers charged with the responsibility for the rehabilitation of disabled ex-service men, and to take such action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training which will fit them for ministering to the sick and aiding in the recognition, control and prevention of disease, shall, at least, meet the requirements and shall receive such adequate training as is defined in the classification of medical schools of the American Medical Association known as Class A, or acceptable medical schools—a standard which is approved by all right-thinking people moved by a desire for public welfare.

Another resolution was an act to disassociate the American Red Cross and its public health activities. To this the Red Cross have agreed but has not yet modified its public health program. The demand was made

upon the Red Cross to cease its public health activities for the reason that such work is foreign to the purpose of the organization and will lead to conflict with reputable medical practitioners. The House of Delegates took appropriate action in this manner in order to convince Red Cross authorities that the public health activities they are engaged in are no longer necessary and that their continuance will prove detrimental to their best interests.

Another resolution condemning the Sheppard-Towner Maternity Act is as follows:

Whereas, The Sheppard-Towner law is a product of political expediency and is not in the interest of the public welfare, and

Whereas, The Sheppard-Towner law is an imported socialistic scheme unsuited to our form of government, and

Whereas, The Sheppard-Towner law unjustly and inequitably taxes the people of some of the states for the benefit of the people of other states for purposes which are lawful charges only upon the people of the said other states, and

Whereas, The Sheppard-Towner law does not become operative in the various states until the states themselves have passed enabling legislation, therefore be it

Resolved, That the American Medical Association disapprove the Sheppard-Towner law as a type of undesirable legislation which should be discouraged.

A resolution providing for an increase for medical officers of the United States Public Health Service reads:

Whereas, The United States Public Health Service activities have been materially increased by various Acts of Congress, owing to the care and treatment of the thousands of ex-service men and women of the World War, and by the increased requirements in rural sanitation, and by the increased requirements in research laboratory work, and by the increased requirements necessary for efficient immigration inspection; therefore, be it

Resolved, That the House of Delegates of the American Medical Association, in annual session assembled, endorse and hereby direct that the proper officers of the American Medical Association take in hand immediately,

memorialize, and petition the federal government, particularly the Finance Committee of the Senate, the Interstate and Foreign Commerce Committee of the House, the President, the Secretary of the Treasury, the director of the Veterans' Bureau, and others who can be instrumental, to secure the enactment of Senate Bill No. 2764, introduced by Mr. Watson of Indiana, House Bill No. 9291 introduced by Mr. Dyer of Missouri, and House Bill No. 9775 introduced by Mr. Newton of Minnesota (known as the Watson-Dyer-Newton enactment); all to reorganize and promote the efficiency of the United States Public Health Service, in that they provide for an increase of personnel of that Service by 550 regular commissions; fifty of these to be dental officers, fifty sanitary engineers, and 450 medical officers, to be chosen from men who hold reserve commissions in the U. S. Public Health Service and who have had not less than three years' service in the Army, Navy or Public Health Service, a part of which time must have been served between April 6, 1917, and November 11, 1918. These bills are personnel bills, and do not in any way change the duties of the United States Public Health Service, and do not require any increased appropriation, but simply supply that corps with the needed medical, dental and scientific personnel.

Another resolution calling for a congressional investigation of the narcotic addition reads as follows:

Resolved, That the house of delegates of the American Medical Association approve house resolution No. 258 (house of Representatives, Washington, D. C.), providing for a select committee of fifteen to inquire into the subject of narcotic conditions in the United States, the personnel of the congressional committee to include all physicians who are now members of the House of Representatives.

Another resolution asking the American Medical Association to participate with the association of American Universities, the National Educational Association, the Carnegie Foundation for the advancement of teaching, and the federation of State Medical Boards in the establishment of a national commission

for the study of drugless therapy was introduced in the House of Delegates.

Another resolution was that the association conduct a survey of pay clinics and group practice, so that principles and policies best designed to protect the general practitioner and the public may be devised. There is much feeling about group practice in the Association, particularly where several specialists in one office are giving specialized treatment.

Suggestions by the council as to medical education included the re-organization of the curricula of medical schools in order to turn out thoroughly trained general practitioners rather than specialists. It further suggested that hospitals be established in rural communities. There seems to be a feeling throughout the country that specialism is overdone. There is today a universal feeling that a demand for the all round practitioner and that the specialists is only needed in exceptional cases. The truth is that ninety per cent of medicine and surgery can be done by what is known as the well equipped general practitioner. The truth of the matter is that the general practitioner must dominate the medical profession.

The meeting was an unusually lively one. The delegates evidently came with the intent of fighting it out in St. Louis if it took all summer. The general feeling among the delegates seemed to be a determination to resist further encroachments upon the rights and privileges of legitimate practitioners of medicine whether by legislative action of State or National Governments or whether the encroachments come from the State Medicine or Soviet government advocates within the profession of which there are a goodly number.

A REPORT OF THE AMERICAN MEDICAL ASSOCIATION HELD IN SAN FRANCISCO, JUNE 1923, WITH COMMENTS

J. N. Brawner, M.D.

Atlanta, Ga.

Before reporting some of the interesting points brought out in the scientific sections

of the American Medical Association, I will discuss briefly some of the resolutions discussed and adopted by the House of Delegates.

The Board of Trustees, of which Dr. Oscar Dowling, of Louisiana, is Chairman, made a very full and lengthy report, in which are some facts of general interest to the medical profession. In this report it was stated that sometime ago the Veterans Bureau gave its sanction to the training of disabled soldiers in what is known as "chiropractic," or the curing of diseases of all sorts by the adjustment of the spinal column. The Board of Trustees had taken this matter up with the Veterans Bureau from time to time but had accomplished very little, and the government, through the Veterans Bureau, is sanctioning the training of disabled soldiers in this cult. On the last day of the meeting of the House of Delegates a communication was received from the chief of the Veterans Bureau in which he stated that no more soldiers would be allowed to be trained in chiropractic, but that those in school would be allowed to continue.

It seems that in different parts of the country chiropractors are becoming very numerous, and in some places they are now making an effort to get on the staffs of hospitals, and in some few localities they have been successful. This, I think, is a fact that physicians of Georgia should bear in mind.

In talking with the delegate from Canada, I was informed that Canada had recently passed a law requiring that a person shall be a graduate from a reputable literary college, requiring at least a four-year course, before commencing the study of medicine, chiropractic, osteopathy or any other cult relating to medicine. They have found that after a person has studied four years in a literary college he will not study chiropractic or any other allied cult, and on this account the study of chiropractic has practically ceased, and since a practitioner must be a college graduate before he can register, the chiropractors in Canada are not increasing.

The Board of Trustees also reported that the collector of Internal Revenue had ruled that a physician could not deduct his traveling expenses in attending his Medical Associations from his income tax. In other words, it has been ruled that this expense is not an expense.

It might be of interest to know that Georgia has 253 less physicians this year than it had last year. California shows an increase of over 600, the largest increase of any state.

Next year it is very probable that the dues for membership in the American Medical Association will be reduced from \$6.00 to \$5.00.

Two or three resolutions were introduced recommending that the American Medical Association try to get an amendment to the Volstead Act, allowing physicians more liberty in prescribing whiskey. After considerable discussion it was moved that the Committee recommendation be tabled and the motion was carried. The concensus of opinion seemed to be that under the present law physicians had no difficulty in getting the necessary whiskey that their patients required.

Many other minor questions were taken up in the House of Delegates, but they were not of much general importance. The question of state medicine was not brought up, but in talking with the various delegates I found the general opinion to be that we are gradually approaching the time when the majority of the sick will be treated by physicians hired by the state.

In the scientific display there were shown some of the most beautiful casts of the arteries and veins of lungs and kidneys that I have ever seen. These specimens have to be seen to be appreciated. They were made by injecting the arteries and veins of the organ to be shown with celluloid which had been dissolved in acetone colored red for the arteries and blue for the veins. After the blood vessels had been injected the acetone, having an affinity for water combined with the tissues, leaving the solid colored Celluloid filling the blood vessels. The organ was then placed in hydrochloric acid which dissolved all the tissues of the organ leaving

only the casts of the veins and arteries in situ, showing all of their ramifications down to the smallest arteriole. The specimen of the lungs and kidneys showed the arterial and venous circulation of these organs, just as it really is, better than anything I have ever seen.

In the scientific sections, lack of time prevented my hearing only a limited number of papers, though I heard those which I thought would contain something new or would be of general interest to the medical profession. In the section on general medicine Dr. Walter M. Boothby, of Rochester, Minn., read a paper on "The Total Metabolism in Exophthalmic Goiter" which was based on some very accurate experimental work. It seems that the most important point brought out in this paper was the fact that in hyperthyroidism the net cost of muscular work in a patient lying in bed, as measured by the total metabolism, is twice that of normal individuals. He also showed that these hyperthyroid cases, even while lying in bed, required 5000 calories per day, while normal individuals, lying in bed, require only from 1800 to 2500 calories. He stated that at the Mayo clinics the hyperthyroid cases are placed on a separate floor, with a separate diet kitchen, so that they might receive the proper diet preceeding operation. By this method the mortality had been considerably reduced.

Another very scientific and interesting paper was read by Dr. Geo. Blumer, of New Haven, Conn., on "Infectious Jaundice." He gave first a history of Infectious Jaundice in the United States, stating that he believed the ordinary catarrhal jaundice to be, in the majority of cases, simply a sporadic cases of infectious jaundice. He brought forth facts and described experiments, which, to his mind, showed that the infectious jaundice which we have in this country is not due to a spirochete and is not the same as Weil's disease as is found in the Orient. In the cases which he had examined no spirochetes had been found, nor had any paratyphoid organisms been found. He stated that the etiology is unknown, but he believes that it is due to some micro-organism that

has not yet been isolated. He also thinks that this disease has some relation to acute yellow atrophy of the liver, as in case of death the liver gives an appearance of acute yellow atrophy.

In the section on nervous and mental diseases Dr. S. A. Kinnier Wilson, of London, England, gave a talk on the role of trauma in the etiology of organic and functional nervous diseases. Dr. Wilson discussed the relation of trauma to epilepsy, the psychoneuroses, paralysis agitans, the insanities, cerebral and spinal cord tumors, spinal concussion and many other nervous conditions. He gave statistics showing that in several thousand cases of gross lesion of the brain caused by gun-shot wounds during the war only about two per cent developed epilepsy. He ridiculed the idea that trauma has anything to do with paralysis agitans; or with cerebral tumors, except in very rare cases; though he admitted that trauma may be the exciting cause in the production of symptoms in latent neuro-syphilis and other organic nervous diseases. In discussing spinal concussions he stated that he had carried out some experiments on guinea pigs, rabbits and dogs which were very interesting. The spinal cord of these animals were exposed and then a small trip hammer was allowed to drop a short distance hitting the cord directly. At first these animals were completely paralysed below the concussion. In a few days the paralysis began to disappear, and in a few weeks the recovery was complete and the animal was as well as ever, showing that there was a complete resolution of the tissue and the function in the spinal cord. Dr. Wilson gave as his opinion that physicians greatly overestimate the factor of trauma in the various diseases of the nervous system, especially in so called concussion of the spinal cord and in the etiology of epilepsy. The traumatic psychoneurotic nearly always recovers very promptly as soon as the damage suit is settled. He stated that physicians are frequently to blame for the production of psychoneurotic symptoms by suggesting to patients that they are suffering from a concussion of the spinal cord.

In the surgical section several papers were read on the possibilities of diagnostic errors in lesions on the right side of the abdomen. In these papers and in the discussions which followed it was shown that surgeons are gradually learning that there are congenital conditions about the caecum and ascending colon most frequently known as Jackson's membrane or Lane's band which cause pain, gastric disturbances, slight nausea, with a tendency for the patients to starve themselves, thus becoming under nourished and finally developing various psychoneurotic symptoms. In other words, it seems that physicians and surgeons are gradually coming to the conclusions reached sometime ago by some of our own members of this society, relative to these congenital conditions about the caecum and ascending colon, which prevents the proper emptying of these organs. This frequently brings about an auto-intoxication and various symptoms due to reflex action.

Unfortunately I was unable to hear the papers on insulin, and what was said came to me second hand. It seems that where insulin is used properly the patients get great benefit from its use. The main objection seems to be the indefinite length of time which the administration has to be continued. It was brought out in a paper on epilepsy that if the sugar content of the blood got below a certain point convulsions always occur, and that they may be induced by giving too large doses of insulin. It was also brought out that the sugar content of the blood could be lowered by the hypodermic injections of the extract of green onion tops and certain other green vegetables. No explanation for this could be given. Convulsions could also be produced this way. These experiments may throw some light on the development of idiopathic epilepsy.

Taking the Association as a whole, I was impressed by the fact that physicians when considering constitutional diseases are now thinking mostly in terms of biochemistry. The mechanism of the infections seem to be pretty well understood, and there is very little discussion concerning them. There is

also very little discussion of gross pathologic lesions or of lesions which can be seen with the microscope. Experimental pathologists and clinicians are now turning their attention to the vitamins, internal secretions and the biochemistry of metabolism. They are beginning to perceive that certain chemicals produced in one part of the body have a selective affinity for certain tissues in other parts of the body, and that in health the body must not only be kept in physical balance, but, also, in chemical balance. To the general practitioner the work being done by these men may seem far-fetched and visionary, but we must remember that it was Thomas Huxley who said "A man who can not reason beyond fact seldom gets as far as fact."

PROCEEDINGS OF THE MEETING OF THE SECRETARIES OF DISTRICT AND COUNTY SOCIETIES HELD WEDNESDAY EVENING, MAY 2, 1923, IMMEDIATELY AFTER THE SCIENTIFIC SESSION.

(Continued from July issue)

We have a few men that are eligible but are not members, and I think one of the main drawbacks is due to the fact that our dues are rather heavy on account of our home. We have paid half of the note for the home this year, and in another year we hope to own the whole thing. Our dues are \$25.00 a year. Our building is a rather large one; we have two upper stories and a basement which serves as a store house for books.

DR. CLAY: We have found in our society that during the first part of the year it is a good thing to send out a card to the members. On this card we have a place for the name, age, college, and so on. We ask for papers to be read through the year. Usually they are prompt in sending back this card, and quite a number at that time give us the title of the papers they wish to read during the year, so that usually by the middle of January we are able to make up our program of papers for the year. This plan works very well. Recently, I have tried out a different system in getting a better attendance which has proved effective.

I had noticed during a meeting that we did not have roll call and we have about 300 or more members. I picked out 20 or 25 men that should be at the meeting but were not there, and that night I sent them a card stating they were missed and their absence from the meeting was keenly felt, and ask them that they attend the meetings. If they did not show up at the next meeting I sent them another card, and usually a second card brings them out. This plan has worked very well with us.

DR. C. K. SHARP: In our Tri-County Medical Society we have three counties organized into one. We have 25 men so that we are able to get a quorum present for a meeting. This year I have adopted a plan copied from the Indiana Society of preparing an annual program. Two men are asked to present papers on a general subject in the nature of a symposium. We meet every two months. We find if we try to hold monthly meetings we cannot get the members together that often. For instance, at our February meeting we considered chest troubles, tuberculosis, pneumonia, etc. We mention a general subject and let the men select their own particular subjects along these lines. In April we had other subjects. In June we are going to have rural surgical cases. We are going to have a few men designated to read papers and others to discuss them. We are going to try and get a motion picture film from Chicago on obstetrics. Those members to whom I have spoken about it are very much in favor of it. At this meeting we will have a symposium on obstetrics. This film I understand costs \$100.00. We try to make every fellow of the society sign up and to pay a fine of \$10.00 if he is not there. Our attendance has been increased over 50 per cent., as a result of the plan we have adopted.

We are going to do some control work this year.

Through the parent-teacher associations, the woman's clubs, etc., we have organized a tuberculosis clinic under the auspices of the Tri-County Medical Society. We are going to have men who are experts on tuberculosis and try to corral all suspects, ex-

amine them, and have the experts lecture on tuberculosis. I find if we want to have a successful county medical society we have to give the members something to do, something to interest them. It is very necessary for us to have original, practical papers and interesting discussions. The members of our society do not care to listen to cut and dried textbook papers. They want original articles based on authority and experience. Along general lines our attendance has increased over two-thirds of what it was formerly. We are developing a good society throughout the district. As a Councilor, I am going to try to develop that idea of doing things throughout the whole district.

THE CHAIRMAN: We feel very proud over our society in Atlanta. Last year we had planned to go into our new home, which we did, and like the Chatham County Society we raised our dues to \$25.00 and this was passed almost unanimously. Some of the members felt that we were going to lose quite a few members on account of raising the dues. In a city of that size, with as many physicians as we have in Atlanta from the College, most of them are good men and are all interested in organized medicine. I find that our membership this year has maintained itself as well as in previous years, and I really believe there has been greater interest shown in the society in the last few months than ever before. Our new home is an old three story dwelling, well built, and centrally located. We have an auditorium on the first floor with a seating capacity of 225. There are three rooms across the hall which are used as a library. Up to the present time we haven't much of a library. We only take about thirty of the current medical periodicals. The rooms upstairs are being rented out to young doctors, but later on we hope to utilize the upstairs for a part of the library. Within two years we expect the financial part of the proposition will be well cared for, and then we think of spending so much money every year for the benefit of the library. We hope to get donations from the people. We expect in a few years to have a real medical library which will be opened to

all members throughout the state, and any time when you are in Atlanta we shall certainly be glad to have you there. Our regular meetings are held on the first and third Thursdays of the month. The program which we have followed for the past two years we have found to be the best, and certainly our attendance at the meetings of the society depends entirely upon the program. If we have a good program, one that is attractive, it will draw out a good crowd. In reference to the presentation of patients, we usually have about two for each meeting. These men are allowed eight minutes each for the presentation of a patient, and four minutes is allowed for discussion. Then we have the presentation of specimens which takes up about four minutes. Then we have a nice feature in what we call clinical talk. We try to get some good man to talk for eight minutes on some subject in which he is especially interested. These clinical talks are usually well received and are very interesting. We have only one paper, as a rule, at each meeting, which is limited to twenty minutes, followed by five minutes discussions. There is practically no business brought before the society. In years gone by we found it hampered the society a great deal whenever business was brought before the body of men. Much time was consumed in wrangling over some trivial matter that could have been settled in a few minutes. Practically all business is handled by the board of trustees which is composed of the five ex-presidents. In that way no business, except in a concise form, is brought before the society. Our meetings are from eight to ten o'clock and are devoted only to scientific work. Without doubt the bringing in once in a while of an outside man stimulates interest, and we have adopted the policy that twice a year an invitation is sent to an out of town guest. Heretofore we have invited a distinguished guest from outside of the state, but this year we have thought it best to invite some of our distinguished men within the state. I think that is proving of more interest than going outside of the state for the men.

High Grade Choked Disks in Epidemic Encephalitis

William G. Spiller, Philadelphia (*Journal A. M. A.*, June 23, 1923), reviews the literature to determine what has been published concerning choked disks in epidemic encephalitis, and reports two more cases which came under his observation.

Calcareous Degeneration of the Dorsal and Lumbar Aortae as a Cause of Backache

John Ridlon and E. J. Berkheiser, Chicago (*Journal A. M. A.*, June 23, 1923), state that no examination of a painful back is complete and conclusive without an examination of the circulatory system, and that the treatment of many painful backs ought to be directed by the internist and not by the orthopedist. The routine employment of girdles, braces and plaster jackets and extension in bed should be regarded with skepticism in the treatment of painful backs. Three cases are reported.

Lobar Pneumonia Complicating Induced Pneumothorax

To two cases of lobar pneumonia involving the uncollapsed lung in the course of a therapeutic pneumothorax, and five cases of broncho-pneumonia, Clough Turrill Burnett, Denver (*Journal A. M. A.*, July 21, 1923), adds one case. A point of interest is the effect of this intercurrent infection on the bronchiectasis. Prior to the pneumonia, the patient was free from foul sputum as long as the lung was maintained in complete collapse; but if it was allowed to reexpand even slightly, the odor was again apparent. This disappeared again with complete collapse. While the treatment was of necessity discontinued for a time, the long interval being forty-seven days during the pneumonia as compared to an average of two weeks before, it was found that, following the pneumonia, while sputum appeared in increasing amounts immediately following the pneumothorax operations, the foul odor has at no time been noted. The patient has entirely recovered from the recent infection, and is continuing the pneumothorax in the hope of obtaining at least a partial relief from the bronchiectasis.

The Patient's Mind

William House, Portland, Ore. (*Journal A. M. A.*, July 21, 1923), summarizes his paper as follows: The sick body is always accompanied by a sick mind. Many sick persons have no organic disorder, but suffer from the effects of suggestion either from within or from without. If suggestion produces disease, it can also cure disease. Recovery of both mind and body is retarded by fear, worry and misinterpretation of symptoms, and is hastened by their removal. Much of the success of the cultists is due to their ability to inspire hope. All that they do can be better done by trained physicians. There is nothing mysterious in scientific psychotherapy. Every physician consciously or unconsciously uses it in his practice. It consists in finding out what is going on in the patient's mind and relieving it by rational explanation and encouragement based on accurate diagnosis. Psychotherapy should supplement and not displace other recognized forms of treatment. Scientific minds will respond to scientific methods, but child minds can be reached only by methods suited to their limitations.

Resuscitation By Intracardiac Injection Of Epinephrin Chlorid

Following caudal injection of 0.5 per cent. procain, preliminary to performing the second stage of a suprapubic prostatectomy, the patient of Paul B. Champlin, St. Louis (*Journal A. M. A.*, July 21, 1923), stopped breathing. An unsuccessful attempt was made at resuscitation with artificial respiration, oxygen, camphorated oil and atropin sulphate. The radial pulse was imperceptible, and no cardiac sounds could be elicited over the precordium. The patient's arms were slightly spastic and the pupils were contracted. A long spinal puncture needle with a 10 c.c. syringe was procured and an injection of 10 c.c. of a 1:1,000 epinephrin chlorid solution was given directly into the left ventricle of the heart through a puncture about 5 cm. to the left of the sternal margin in the fifth intercostal space. This was done about five minutes after the patient had collapsed. The

result was almost instantaneous. The heart began beating so vigorously that the pulsation of the abdominal aorta was seen through the abdominal wall within thirty seconds following the injection. Examination revealed a strong rapid radial pulse with feeble respiration at first, later becoming full and strong. The blood pressure taken about five minutes after injection, was 200 systolic and 110 diastolic, the same as on entrance to the hospital, but the systolic pressure was 40 mm. higher than it was just preceding the operation. The patient showed no ill effects of the procedure, except for a single instantaneous sharp shooting pain over the precordium late the following day. The operation was completed about one week later, under caudal anesthesia. The prostate was found to have a malignant growth, which on roentgen-ray examination, showed metastasis to the lungs. The patient was discharged twenty-five days after the second stage operation, with symptoms of lung metastasis, but able to be up and around.

The Prevention of Certain Forms of Chronic Cardiac Valvular Disease

In rheumatic endocarditis, the tendency of the inflamed valves is to heal; they may heal without deformity and there may remain no clinical evidence of previous disease, or the heart may remain enlarged as a result of the temporary incompetence of the valves. The permanent deformity of the cardiac valves in many cases of chronic valvular disease, according to Warren Coleman, New York (Journal A. M. A., July 21, 1923), is probably due to recurrent attacks of endocarditis. Healing of the valves is promoted by keeping the patient in bed. This treatment should be maintained until after the disappearance of all constitutional symptoms.

Urticaria Caused by Light.

W. W. Duke, Kansas City, Mo. (Journal A. M. A., June 23, 1923), reports the case of a woman who became so sensitive to light that on two and one-half minutes' exposure of the skin to direct sunlight, typical itching hives, with erythema of the skin, invariably

appeared over the area exposed. The reaction was almost identical to the reaction of allergic individuals on intracutaneous injection of substances to which they are sensitive. Constitutional symptoms were felt on two occasions when a large area of the skin was exposed to light. Local tolerance was developed by repeated exposure of small areas of the skin to light, but it did not last indefinitely. This reaction was produced only by light of a wave length transmittable by violet glasses.

Late Results in the Treatment of Syphilis

H. H. Hazen, Washington, D. C. (Journal A. M. A., June 23, 1923), says there are no satisfactory criteria as to the cure of syphilis. Relapses may occur after a patient has been asymptomatic and had a negative Wassermann reaction for six or seven years. Not all cases of early chancre are cured by modern methods of treatment. The early and intensive administration of arsphenamin may prevent a patient from developing a natural immunity, and a relapse may occur shortly after treatment is discontinued. Cerebrospinal syphilis can develop by the time the chancre is manifest. Every patient should have a spinal puncture preferably just before the second course of arsphenamin. A provocative Wassermann may be misleading, and may be dangerous in that a relapse may follow it. A leutin reaction under proper precautions may be of value as a criterion of cure. The results of treatment in early secondary syphilis are surprisingly good. A few cases of late syphilis can be cured, but in the vast majority of instances, late syphilis cannot be cured. Intraspinal therapy will often yield results when intravenous therapy fails.

Observations on Use of Insulin in Diabetes Mellitus

In using insulin on more than forty diabetic patients, W. H. Olmsted and S. H. Kahn, St. Louis (Journal A. M. A., June 30, 1923), have never used less than 10 units a day. This adds from 15 to 20 gm. of carbohydrate to the tolerance of the patient, an amount often sufficient, when used with ap-

appropriate amounts of fat, to bring about a positive nitrogen balance in place of a negative one. In such a class of patients, it hardly seems worth while to use smaller amounts of the extract. Insulin, besides increasing the caloric tolerance, is invaluable in coma and in conditions in which severe infections complicate the disease. Ten patients in comatose and precomatose states have been treated, and all have shown blood alkali percentages by the Van Slyke method or 25 per cent or less by volume. Six were below 15 per cent by volume. In the author's experience, insulin alone does not bring about so rapid a return of blood alkali as when used in conjunction with intravenous alkali. A procedure adapted to the treatment of coma is the administration of 20 units of the extract every three hours. Future dosage is regulated by the change in the blood sugar. As soon as the blood carbonate is normal, or the ferric chlorid reaction in the urine becomes faint, the intervals between doses are lengthened to six or eight hours.

Studies on the Therapeutic Application of *Bacillus Acidophilus* Milk

In view of their own results and those of other observers, Harry A. Cheplin, H. Clifford Fulmer and Clyde O. Barney, Syracuse, N. Y. (Journal A. M. A., June 30, 1923), feel that the application of the acidophilus milk therapy is worthy of further investigation in the treatment of other ailments directly or indirectly referable to intestinal disturbances. They suggest also that it be given a trial in specific infections, such as typhoid and paratyphoid fevers, and dysentery. *Acidophilus* milk therapy, if properly carried out, is a resource which has a sound, logical, scientific foundation, and which in time may take a high place in the scale of efficiency. *Bacillus acidophilus*, when given by mouth in the form of minimum amounts of milk cultures, lends itself to complete implantation and colonization within the human digestive tract, effecting a complete simplification of the fecal flora, and supplanting almost all known intestinal toxicogenic microbes. In chronic constipation, there was marked clinical improvement in the so-called toxic symp-

toms and regulation of the fecal eliminations from the bowel. In mucous colitis, beneficial changes were noted clinically, with daily natural defecations free from any mucus.

The Treatment of Amebiasis

Although any drug that affords prompt clinical relief from amebiasis deserves serious consideration, it should be clearly appreciated, in the interest of progress, that neither *Castela nicholsoni* nor emetin, as employed at present, is an ideal agent for the eradication of *Endamoeba histolytica* infections in man. It has long since become evident, through careful examination of the stools of patients, that freedom from clinical symptoms does not constitute a biologic test for the eradication of the invading protozoa. A serious difficulty in the study of drugs detrimental to amebas has been the lack of satisfactory methods for artificial cultivation of the admittedly pathogenic species. From an experimental standpoint it is fortunate that amebiasis can be induced with more or less success in some of the common laboratory animals, notably cats. Spontaneous recovery is rarely noted.

Sellards and Leiva have come to the tentative conclusion, from their observations in treating infected animals with emetin, that recovery from ambetic dysentery in man and other species results from a combined action of the natural resistance of the host and a moderate action of the drug on the amebas. The summation of these two factors is necessary for a radical cure. A lowering of either allows the disease to progress. Incidentally, also, they* have come to the conclusion that stasis is probably an important factor in determining the location of the lesions within the large bowel, in spontaneous amebic dysentery in man.—*Jour. A. M. A.*, June 30, 1923.

*Sellards, A. W., and Leiva, L.: The Effect of Stasis on the Development of Amebic Dysentery in the Cat, *Philippine J. Sc.* 22:39 (Jan.) 1923.

Intracutaneous Reactions in Pertussis

Thomas G. Hull and Ralph W. Nauss, Springfield, Ill. (*Journal A. M. A.*, June 23, 1923), used nine different preparations of pertussis vaccine, and 341 injections were

made intracutaneously. The work was done at an institution where an epidemic of whooping cough was developing. The ages of the children tested in most instances were from 8 to 12 years. The results of the investigations recorded do not indicate that preparations of pertussis bacilli can be used intracutaneously to diagnose whooping cough. Freshly prepared suspensions, suspensions 3 years old, suspensions killed by heat and suspensions killed by chemicals gave results that were conflicting. Nearly all children, whatever their ailments, gave positive reactions. Whooping cough patients at times gave negative reactions, however.

The Electrocoagulation Method of Treating Diseased Tonsils

Frank J. Novak, Jr., Chicago (Journal A. M. A., June 23, 1923), employed this method in 100 cases. Without exception, the patients had a stormy experience beginning a few hours after operation. Pain was uncontrollable save by liberal doses of morphin. There was extreme difficulty in swallowing, much greater than after tonsillectomy. The plate was extremely edematous, and speech was impossible. The intensity of this reaction persisted through the sixth day. Whatever logical basis electrocoagulation of diseased tonsils may have, from a theoretical standpoint, is far overshadowed by the unsatisfactory results in actual practice. Novak believes that the method is entirely inadequate, inaccurate and unsatisfactory, and cannot in any manner compete with the accepted present-day methods of tonsillectomy.

Hemorrhagic Osteomyelitis

Max Strunsky, New York (Journal A. M. A., June 23, 1923), reports a case of hemorrhagic osteomyelitis of the tibia following

a fall. At operation, a cavity in the bone was found, filled with a viscid, bloody material. The cyst was curetted and scrubbed with iodine and alcohol. The incision was then enlarged over the entire length of the tibia, and the entire crest of the tibia removed. The graft was cut into fragments and dropped into the cavity, which even then was only one third filled. The patient recovered entirely in eighteen months.

New and Non-Official Remedies

During April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Abbott Laboratories, Neutral Acriflavine-Abbott, Tablets Neutral Acriflavine-Abbott, 0.03 Gm. ($\frac{1}{2}$ Gr.) Enteric Coated Tablets Neutral Acriflavine-Abbott 0.03 Gm. ($\frac{1}{2}$ Gr.)

Hynson, Westcott & Dunning, Phenoltetrachlorophthalein-H. W. & D. Ampules Phenoltetrachlorophthalein-H. W. & D.

Mallinckrodt Chemical Works—Carbon Tetrachloride Medicinal-M. C. W.

Merek & Co.—Skiabaryt (for Rectal Use)-Merek. Skiabaryt (for Oral Use)-Merek.

Powers-Weightman-Rosengarten Co. Carbon Tetrachloride C. P.-P. W. R.

Nonproprietary Articles—Neutral Acriflavine. Carbon Tetrachloride Medicinal.

When Jimmie takes his sister out
A-riding in his flivver,
He uses both arms to steer
And drives without a quiver.
But when he takes his favorite gal
Beside him in his lizzie,
One arm is on the steering wheel—
The other one is busy.

—The Hartwell Sun.

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MEDICAL ETHICS*

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Atlanta, Ga.

In ready response to the request of the Dean, I have the pleasure of meeting you gentlemen, to offer for your consideration some remarks upon Medical Ethics.

'The lexicographer defines ethics as "A treatise on morals." "The science of moral duty." A system of moral obligations, as social ethics, medical ethics, etc."

By morals is meant, "Conforming to, or embodying righteous or just conduct." So, when we speak of a code of medical ethics, we mean an accepted and orderly expressed guide to correct, proper, righteous and just conduct and feeling between individual physicians, and toward the medical profession and toward the public on the part of medical men.

It is obvious that to insure uniformity in personal intercourse and to regulate professional relations, some generally recognized plan or formula must, of necessity, be adopted and followed, and this essential standard of professional deportment is represented in the code of ethics of the American Medical Association.

It is manifestly true then, as we shall presently perceive, that the code of medical ethics is a guide of professional conduct, a chart of professional manners, a law of professional behavior. It is all of this and more, for adherence to its tenets is a test of professional respectability, an indispensable element of professional success and an essential key to desirable and helpful professional association.

A knowledge of its precepts therefore is in the highest degree advantageous and fidelity to its principles is imperatively necessary as a badge of high professional character. Ignorance of its provisions—as in the case in civil law—is no excuse, and wilful disregard of its requirements cannot be condoned.

True it is, that the principles set forth and the practice advocated and required in this code represent only the controlling influence instinctively followed by gentlemen, but even among gentlemen, there are more or less divergent views upon questions of detail, so that minor points as well as grosser derelictions deserve attention and need to be reconciled and brought into harmonious accord.

If an individual thinks at all, he must think with his brain, and he can only think such thoughts as his brain is capable of producing. These products of cerebral activity must, necessarily, depend upon the quantity and quality of his gray matter, upon his environment, education and training in developing and strengthening his native mental resources. So that, variation in cerebral function exists, has always existed and will always exist. Men have not, they do not, they will never think in the same groove. Men cannot think alike even if they sincerely desire and earnestly strive to do so. They never have been and they never will be of one mind until every brain is cast in the same mold, is of the same size and same fineness and has grown to maturity and continues under identical conditions and influences. This concatenation of events, of course, will never occur. Hence, the necessity for a professional law, intelligently considered, wisely devised and carrying suitable penalties for any violation of its provisions.

*An address to the Graduating and Junior Classes, 1923, of the Medical Department of Emory University, repeated, by request, to the Fulton County Medical Society, August 2, 1923.

A law that advises, enlightens and restrains, and that contributes to and encourages higher and truer standards of excellence.

Half a century ago, this proposition was comparatively simple, but life is now more complicated. The problems of life have become far more complex. Temptations are more alluring, more insidious, and they are more frequently encountered. The exigencies of existence are more urgent. Therefore, the greater necessity for mutual understanding and for more rigid control.

The medical profession has shared within that period, entirely beyond its due proportion, in these changes and its difficulties its dangers and its burdens have multiplied many fold.

The existence today of numerous specialties does not tend toward the promotion of unity in the profession, but tends rather toward division and discord, and toward the formation of classes within the ranks whose interests, as they see them, may not always be in harmony with the sentiment of the general profession, and which may, under the circumstances, develop narrow views and prejudiced conclusions, and a clanish selfishness, and invite a want of harmonious relations, not alone to the general profession, but also toward other classes.

I do not refer to specialties in medicine to condemn them. They are recognized and approved by the American Medical Association, and properly organized and discreetly conducted they undoubtedly contribute to scientific progress, but, unhappily, it must be admitted that, in practice their members are not at all times and under all conditions free from selfish designs, and, occasionally, no doubt, they are actuated by unworthy motives.

Forty years ago, a distinguished, a highly esteemed and honored physician of Atlanta, representing the prevailing views of that day, wrote that, "Specialties have never been encouraged, but barely tolerated, and the sentiment of the great mass of regular medical men has been opposed to the assumption of special skill upon the part of any member of the profession.

"The only form of specialism which has been in real accord with the spirit of the code of ethics is that which has originated in long, laborious and eminent experience in some particular department of medical science upon the part of the general practitioner, and which has commanded the unsought confidence and approval of the profession. The very best that can be said of specialties in medicine is that they seem to be inevitable evils."

It is a long cry from that day to this, and during the relatively brief interval, in the struggle to get there quick, the "inevitable evil" has multiplied and magnified in amazing degree and has flourished like a green bay tree.

The ordinances of the American Medical Association, explanatory of the text of the code, favor specialties as legitimate fields of practice; declare that specialists shall be governed by the same rules of professional etiquette that have been prescribed for general practitioners, and that it shall not be proper for specialists to publicly advertise themselves as such, or to assume any title not specifically granted by a regularly chartered medical college, and that cards in medical journals calling the attention of medical brethren to themselves as specialists violates the code, as also, do private cards and hand-bills for like purpose even when addressed only to members of the medical profession.

It is presumed that these interpretative paragraphs are now in full force and effect, as I have no knowledge of any modification or repeal. But, in any event, even if they are not now obligatory, they ring true, and if they are not now included among ethical requirements, the doctrine which they promulgate and inculcate is sound and the practice indicated is commendable.

Nevertheless we know, gentlemen, of course, we know, that in many instances the individually assumed title is only a cloak for insincerity and for incompetence, and that the title means nothing more to the pseudo-specialist than a convenient disguise and a cheap trade-mark.

Some years ago, a chipper little American doctor who was "doing" Europe, to make capital for himself in his home town, pranced up to a distinguished English physician and said, "Doctor, I believe you GO IN for diseases of the skin."

The doctor, looking down upon him, much as a magnificent mastiff might contemplate the antics of a fussy little fice, answered, "Yes, for diseases of the skin, and all that the skin contains."

The gratuitous assumption of vastly superior knowledge, sometimes freely proclaimed, constitutes a menace to professional welfare, and totally unwarranted claims, expressed or implied, together with unjustifiable criticism of the views or the practice of others compromise the dignity and the influence of the whole medical profession. Such claims are misleading and deceptive so far as the public is concerned, and are indistinguishable from the ordinary practices of the rankest charlatan.

One thing relating to specialism is certain, as certain as anything can be which has happened many million times, and that is when a case comes along—a case supposed to be in the line of a professed specialist, whatever that line may be, it does not, by virtue of his alleged specialty, belong to him. He has no superior rights, no prior claims, and any physician who may presume to treat it is neither an interloper nor a trespasser.

We had a specialist here once. The front windows of his office on Broad Street were obscured by enormous box-car letters announcing him, "A specialist in all diseases of men and women!"

Let me remind you, gentlemen, that the greatest evils which afflict a suffering world today are selfishness and avarice. If this twin evil, this withering blight, this deadly influence could be eradicated, then, indeed, would this earth be an Eden like the Heaven above.

The so-called, self-styled "diagnostic clinics" and "group-practice" have not yet been declared reactionary. In other words, they are new—a late innovation. Their practical utility—not to their promoters—ah, no—but to the profession and to the public

remains to be shown, but it may be confidently expected some of the evils under the sun will be automatically cured when the pocket is persistently pinched.

Gentlemen, you cannot operate for cancer in the "pre cancerous stage." Oh, no. In the pre cancerous stage there is no cancer and there is nothing under heaven to justify the fallacious claim that cancer may be thereby prevented. But, forsooth, there may be an operation. Ah, there's the rub.

We hear the expression, "Threatened with cancer." Within the fortnight, I have read an article published in the proceedings of a state medical association purporting to furnish some statistical data relating to the treatment of cancer of the uterus by means of radium. A paragraph commences, "In the case of women threatened with cancer of the uterus"—What is the opinion of any one who writes that worth? What is such evidence worth? It is, of course, nothing more than supreme nonsense.

"Threatened with pneumonia" is a popular phrase. Does disease stalk boldly into the arena and announce its purpose of attack? Does it utter dire threats preliminary to the deadly assault?

I have never heard them.

In all of these silly assertions there is even less reason than in declaring that a particular individual is threatened with a nail in his foot.

It is not possible to find in the blood evidence of disease when no such evidence is therein contained—but it seems to be done. Neither can excuses for meddlesome surgery be found concealed in remote and hidden recesses of the passive and long-suffering body when nothing abnormal is there. But they appear to be found.

"For optics sharp it takes, I ween,

"To see what is not to be seen."

Wholesale tonsillectomy and reckless teeth extraction may be mentioned as existing grievous wrongs.

Exaggerating the importance of, and the necessity for X-ray pictures is not rare. Pictures, as they appear, are not always infallible evidence, and their diagnostic value is

oft times greatly overrated. Intravenous and intra spinal injections invariably involve an inevitable percentage of risk—of danger—and they should not be lightly undertaken—undertaken to the glory of the operator.

I once wrote, "Honesty is the best policy." A devoted friend of mine, but a merciless critic, said, "That is putting honesty on a low plane. Strike out that line and write instead, 'The Lord hateth lying lips.'"

Yes, lying lips and lying thoughts, gentlemen, are not merely an idle figment of the imagination.

'Tis true. 'Tis pity, and pity 'tis, 'tis true."

Human nature is weak. The wish is father to the thought. It is easy to think what one desires to believe, and to do what one wants to do. I can see a great difference, in this respect, between now and then. In those days, the patient was considered first. The doctor, his convenience, his comfort, his interests—financial and otherwise—were not balanced against the patient's welfare. The patient's interests took precedence. The patient was the object. The doctor was not the prime consideration, but he was the willing means to a noble end. How is it now? Echo answers, How. Now.

I abhor medical nicknames, as much as I abhor technical slang, and among these, standing at the very head of the column as the most abhorrent of them all, is "Internist." A comparatively recent, an inaccurate and unjust addition to the ever lengthening list of beautiful cognomens applied, nолens volens, by or without the leave of innocent and helpless victims. It is a discrediting, deceiving, undeserved and disgusting misnomer. But for this class of epithets, a passing gesture of contempt and of dissent will suffice.

Belonging to this category, however, are the designations affixed to the so-called schools of medicine, as homeopaths, eclectics, reformed, DE-formed, hydropaths, osteopaths, root, urine, steam and herb doctors, et cetera, ad infinitum, ad nauseam. All of which names indicate restricted practice, and, therefore, these titles may be deserved, and appropriate enough for those who claim

them. But the attempt to fasten upon a dignified, liberal, enlightened, scientific and self-respecting profession the nickname "allopathy" is a willful affront which should be resented and indignantly rejected. It is derogatory to the dignity of a scientific physician and offensive to his sense of propriety, of justice and of truth to have such a descriptive epithet applied to his calling, and it argues either disgraceful ignorance or inexcusable carelessness, upon the part of any member of the regular medical profession who accepts or who applies the humiliating appellation. The regular—the educated and scientific physician, of course, adheres to no school, practices no "pathy," accepts no cardinal dogma, acknowledges no narrow creed, recognizes no arbitrary limits, belongs to no sect, and tolerates no restriction. He employs any and all of the means that his reason or experience teaches him are useful in combating disease or in meeting morbid conditions. He refuses to avail himself of nothing that offers relief or that promises benefit. He exacts of all sources agencies which he commands. For our remedies, we reach into the limitless ether and dip in the fathomless sea.

How then, I ask, can there be any association or affiliation between the disciples of this class and the adherents of any medical sect; between the intelligence and the ignorant or the stupid; between rational and irrational methods; between honesty and the dwarfed, prejudiced or designing practitioners of any school or of any exclusive system who feed upon ignorance and fatten upon credulity?

Any member of a decent profession so cursed by cupidity that he will be tempted to utilize these pitiful qualities in unsuspecting or in defenseless persons for his own gain, for his own greed—is even more contemptible and more despicable than are the unscrupulous cormorants who openly avow or tacitly admit their nefarious practices and who shamelessly ply their wicked vocation.

No man with only one idea—even if he is an honest man, and even if the idea is a good one—can be safe and trustworthy. The real

problems of life can only be solved and successfully met and managed by broader views and by the application of rational methods, by methods in accord with reason and experience.

The responsible physician should always be unhampered in the selection and the application of remedies which he employs, and I look with concern upon the growing tendency toward encroachment upon his legitimate domain by any department of government—either legislative or administrative—under the control of laymen profoundly ignorant of all matters pertaining to medical practice, whereby the rights and lawful privileges of the physician are curtailed by legal enactments prompted by the demands of meddlesome fanatics or by the pressure of political expediency, or decreed by the capricious ruling of some petty political official, which device, of late in this country, seems to outweigh and to override statutes in force, directness and effectiveness.

Moreover, the censorship sought to be placed over the physician is not the only objection to this exacting and extra-legal exercise of arbitrary authority, for by regulations of this character, the citizen, in his need and perhaps in his extremity, is deprived of an inalienable right to receive any means, deemed by competent advisers, as useful or necessary for his protection or for his restoration.

The practice of medicine is a profession, and in choosing this profession the obligation is assumed to respect and to observe its ideals, and so to demean ourselves as to exalt its standards and to extend its sphere of usefulness.

A truthfulness and a conservative candor should characterize the physician in his intercourse with his patients or with the family representatives, and while discretion, reserve and tact are essential in our relations to the sick, deliberate deception is not permissible, and even to minimize or to exaggerate a patient's condition does not accord with the principles of ethics.

It is important to remember that not only the letter of the code, but alike the intent and the spirit of its precepts should control.

Respecting alike the written and the unwritten law. The expressed and the understood niceties and refinements of manner and of interpretation which constitute the essence of good form—always manifesting, not alone reluctant loyalty, but zealous fidelity to high professional standards and to exalted aims.

Any attempt to procure patients directly or indirectly by attracting attention to himself by written or spoken words, or by permitting such performance on the part of another person, is reprehensible in the physician. Self-praise defies the traditions of the profession and lowers professional tone. Boasting of skill and success are likewise intolerable.

Competition, either in the matter of fees or based upon other grounds, has no place in a medical vocabulary. The code declares, solicitation of patients, individually or collectively, that is in groups or assembled in any institution or organization, directly or indirectly, is unprofessional.

Emulation is commendable, but to seek an unfair advantage by offering inducements of any kind to patients or by permitting such offers to be made, or by secret, surreptitious or coercive methods to gain advantage of another, is vulgar and low, and no gentleman would ever be guilty of such degradation.

Success built upon an unstable foundation must be unsatisfactory, unreliable and, in the end, disappointing. The most worthy and effective assurance of success lies in the establishment of a merited reputation for professional ability and professional honor. Yet, let it be known, that merited reputation can not be forced, but must be developed as an outgrowth of character and conduct, and in following this course, even if we should fail to reach the coveted goal, if we should not achieve our chief ambition, as desert is better than achievement, our recompense will be sure.

"Honor and shame from no condition rise,
"Act well your part, there all the honor lies."

A spirit of commercialism has of late pervaded the profession, and it represents one of the evil tendencies of the times. Receiv-

ing remuneration from patents for instruments or for medicines, taking rebates on prescriptions, or perquisites from attendants upon the sick, hobnobbing with nurses, accepting or giving commissions, splitting fees or indulging any form of trade or barter is expressly and severely condemned. Scarcely less reprehensible is it, to take advantage of existing fear, of misfortune or of confiding faith in the physician, on the part of a patient, to exact an excessive or unreasonable fee for necessary—and, more especially, for unnecessary—services. Financial gain should always be subordinated to higher and nobler considerations.

Have a heart, gentlemen, have a heart. Deal justly and love mercy. I am well aware of the many doubts and perplexities which encompass the conscientious physician, and of the innumerable difficulties which obscure his pathway, but I believe that a general rule may be invoked to solve most of these troublesome problems. We may usually see the light if we only remember the great injunction, "To love thy neighbor as thyself," and if we treat others as we would have them treat us—ah, yes, if we should be as liberal in our estimate of others and as generous in our treatment of them, as we are of ourselves, then truly will life be crowned with charity and good will.

A physician is under no obligation to respond to every call that is made upon him. He has the right to choose whom he will serve, but urgent demands upon his services should be met, prompted by considerations of humanity, and his attentions should continue until the regular attendant arrives or until the emergency ceases. It is scarcely necessary to refer to the duty of relinquishing a patient to his usual medical advisor, if he has one, as soon as such transfer is practicable, whether the patient is seen in an emergency or in the temporary absence of his regular physician. Neither does the expressed preference of the patient or of his friends to the contrary invalidate this obligation of one physician to another. Nor is there any excuse for stretching the plea of humanity to cover selfish or designing purposes.

Consultations between physicians tend to the development of liberal views, and should be encouraged or sought in obscure, doubtful or very serious cases.

Comments, insinuations or criticisms relating to the management of a case by another physician are in extremely bad taste and are distinctly unethical. Social calls upon the patient of another physician should be avoided as much as possible, and if they cannot be escaped, no discussion of the case should be indulged.

The use of secret medicines alleged to be effective in specified diseases, of course, is evidence of incompetence and of a total want of any conception of the obligation which rests upon the physician. The employment of compounds without knowledge of their composition because, forsooth, they are represented by some enterprising and mercenary dealer or manufacturer as good for liver complaint, for kidney trouble, for stomach disorder, for heart disease, or useful as a tonic, alterative or restorative, is a severe reflection both upon the intelligence and the honesty of the prescriber.

Mystery in medicine is unadulterated charlatanism.

The relation between physician and patient is a confidential relation, and as such, should be studiously observed. Any failure to recognize and to observe this obligation is a shameful betrayal of trust. In some states of the Union, confidential communications to the physician are privileged, but they are not protected by statute in this state, and a physician may, therefore, be compelled to divulge, in a court of law, confidential statements made to him by his patient. Except under the force of legal compulsion, information obtained from a patient by his physician, acting at the time as a medical advisor, should always be held sacred.

Some aspirants for membership in the medical profession, and also some existing members, are disqualified by want of educational requirements or by the absence of essential attainments or by deficient moral character, or defect in other basic qualities which ren-

der them unfit for the career to which they aspire, or which they discredit. It is impossible to make an honest physician out of a dishonest man. It is not feasible, by any artificial means to transform a fool into a sage. A silk purse cannot be fashioned from a sow's ear. It is beyond the range of possibility, by any process of teaching, to produce skill, judgment, honor or other high qualities or accomplishments out of fundamental ignorance, dullness, depravity or corruption. The transformation of the baser metals into gold has not been accomplished. The crude material must, of necessity, influence, more or less, the finished product.

But in the case of qualified candidates for professional honors, for young men whose natural gifts are adequate, and who have diligently utilized favorable opportunities for the improvement and for the development of inherited and cultivated ability, young men of the right moral stamina, and endowed with the fixed determination to studiously strive for the attainment of the highest and the very best the prospects are bright. Achievement involves work, work, work. Our only rest is labor for a worthy end. Intelligent application, industrious consecration and patient fidelity mark the way toward the highest rewards.

"For sluggards' brows the laurel never grows.

"Renown comes not of indolent repose."

As you sow, so shall you reap, is an inexorable law. The harvest depends upon us. The returns of a well-spent life are within our reach, and the surest road to contentment—which means happiness—is found in devotion to the welfare of our fellowmen, and thus, while sowing outward fields, may be heard "The harvest song of inward peace."

The physician's conduct should always be above reproach. In the performance of his professional duties, he should be conscientious, studious, thorough, courageous, conservative, prudent, courteous, patient, punctual, faithful, unselfish and, in this manner, will be fulfilled the law of perfect service. A service which will reflect honor upon him, lustre upon his profession and benefits upon

the recipients of his grateful ministrations.

But, gentlemen, "This above all, to thine own self be true and it must follow, as the night the day, thou can'st not then be false to any one."

IMPORTANT CONSIDERATION OF OVARIAN TUMORS OF ALL TYPES*

T. P. Waring, M. D.

Savannah, Ga.

The public has become in late years so well educated in the importance of surgical removal of tumors that the large classical ones are seldom seen as the patient seeks the surgeon before the growth has become any more than apparent. But there are accidents which may happen to the smaller growths before they are discovered by the patient, which are fraught with danger to life. It is of these conditions, often overlooked by the patient and physician alike, consideration of which is asked in this paper.

Quite recently having had a series of cases of severe illness from torsion of the pedicle, and from breaking through of proliferating cysts, and other types, I was led to believe that these conditions were not looked for as much, nor the diagnosis as keenly made prior to operation as they should be. Before going into the discussion of cases, it will help us not a little to understand the pathology of ovarian tumors. The classification given is mainly that of James Ewing.

Tumors of ovary are divided into two main groups:

- (1) Non-proliferating tumors.
- (2) Proliferating tumors.

Non-Proliferating Tumors

- (A) Follicle cysts—produced by abnormal secretions of an atretic follicle (Graves).
- (B) Corpus luteum cysts—caused by incomplete involution of a corpus luteum.

Follicle Cysts

Most are monolocular and reach size of the fist; some are lined by epithelium and grow much larger from active secretion of living epithelium. Essentially benign and

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almost no tendency to papillary outgrowth; occasionally hyperplasia of connective tissue causes a wart-like excrescence. Contain clear amber fluid.

Corpus Luteum Cysts

Cystic function in more advanced stages in development of follicles. Attain about the same dimension; cyst content is of reddish, turbid character.

Internal bleeding of follicle or corpus luteum cysts results in blood cysts. Bleeding usually is at menstrual period; may cause severe pain and serious symptoms, even death; usually, however, not serious and blood is absorbed. Probably these are the cases where cyst is felt on bimanual examination and disappears in short time. True cysts do not disappear in this way unless they rupture.

Proliferating Tumors

Neoplastic growth from ovarian tissue.

(A) Parenchymatous tumors—From epithelial elements.

(B) Stromatogenous tumors—From connective tissue structure; fibroma and sarcoma.

Parenchymatous Tumors

Eighty per cent of all new growths are adenomatous in character of which the greater number exhibit secretory activity on the part of the epithelial cells lining the adenoma. These are called cystadenoma. All are multilocular. The epithelium lining also sprouts forth into papillary branches, usually toward the lumen of the cyst, called "inverting," but also toward the outside appearing as excrescences on outer surface of tumors called "everting." These papillary excrescences may form implantation metastases. Cyst adenomata of ovary are of two types:

1. Pseudomucinous cystadenomata.
2. Serous cystadenomata.

Pseudomucinous Cystadenomata

Commonest form of ovarian tumor; usually unilateral, rarely develop between the leaves of the broad ligament, tend to pedicle formation; always multilocular; cysts filled with thick mucoid substance "pseudomucin"; normally clear: straw colored fluid, but frequently altered by transudate from blood

vessels, necrotic changes in cyst wall, and torsion so that it varies from yellowish and greenish-gray tones to dirty brown or black. These tumors are essentially benign, grow slowly and attain great size, rarely develop carcinomatous degeneration, differing from serous cystadenomata in this respect.

Serous Cystadenomata

Tendency to grow in both ovaries; pedicle not usually good and tendency to grow between the leaves of the broad ligament. These cysts are multilocular and contain a clear serous fluid. They grow more slowly and not so large as pseudomucinous variety. These cysts have a much greater tendency to papillary excrescences, and thus to malignant degeneration, with implantation metastases. The non-papillary variety is usually benign, but papillary growth may be microscopic in size, and recurrence in cancerous form may develop after operation on an apparently benign growth.

Carcinoma of Ovaries

(a) Genuine carcinomata very rare (developing from previously enlarged ovarian tissue) do not grow very large; appear soft, white and brain-like cyst formation often dangerous when they break through the outer capsule.

(b) Cystic carcinomata may start as malignant tumors or may be malignant degeneration of benign papillary cystadenomata.

(c) Metastatic carcinoma of ovary: Dermoid cysts and teratomata can be classified neither as parenchymatous nor as stromatogenous, in that they develop from germ cell elements and contain in their structure tissues of all three germinal layers; they are termed oviogenous.

Dermoid Cysts

Constitute five to ten per cent of all ovarian tumors; may occur only in one ovary or bilateral. Rarely multiple; practically always monolocular. Usually not larger than a man's fist. These cysts contain sebaceous material, hair, bones, etc. They grow very slowly and have a tendency to become malignant, in contrast to teratomata. Dermoid cysts are apt to have long pedicles and are prone to torsion.

Teratomata

Rare and allied to dermoids in their structure. Unlike dermoids, they are essentially malignant. They grow rapidly and metastasize freely; they reach a large size. Reports of less than fifty cases of teratoma of ovary are found in the literature.

"It was formerly thought that dermoid cysts and teratomata represent a form of incomplete parthenogenesis, but this idea has been somewhat modified. It is now supposed that the dermoid does not develop from a true germ cell or ovum, but from a blastomere, which at an early time has been separated from the original germ cell bundle. The isolation of such a blastomere to be transported away from its original location accounts also for the dermoid and teratoid tumors found in other parts of the body."

Cases

These histories are boiled down so as to bring out only the illustrative point.

Mrs. M., age fifty, examined two years previously by a well known surgeon, and told she had a tumor, probably fibroid, but as it did not trouble her and as the surgeon did not urge operation she neglected to have it removed. While attending a session of the Society of Colonial Dames at Savannah, she was suddenly seized with nausea pain in the lower abdomen; retired to her room but delayed sending for a doctor as she thought the attack was due to too much party food at the convention. She was seen by me forty-eight hours after the inception of the attack. The abdomen was rigid; there was considerable tenderness on pressure, and a mass could be felt in the lower abdomen. Leucocyte count was 12,000. There was only slight rise of temperature; bowels had been freely evacuated by methods instituted before the doctor was called. The correct diagnosis of ovarian cysts with torsion of pedicle was made, but operation was delayed for another forty-eight hours because of desire for consultation with family and the surgeon previously consulted.

Operation

An ovarian cyst with beginning gangrene of wall was found. There was a long pedi-

cle with two twists in it and thrombosis of the veins. There was cellular peritonitis about the cyst, making it adherent to pelvic peritoneum, but no pus. Cyst was easily removed and abdomen closed without drainage. Recovery was easy.

It is remarkable how long these cysts remain strangulated without destroying life, and the patient eventually saved by surgical operation. This is illustrated by the second case.

Mrs. B., thirty-two years of age, gave this history:

Six months ago weighed 206 pounds, was in very good health, but at medical examination for the cause of a dermatitis, was found to have glycosuria. A pelvic examination at this time was negative. She was successfully dieted, sugar eliminated and weight reduced to 175. At this time she developed an acute arthritis of one knee joint. This not yielding readily to treatment, she was taken by her husband to Hot Springs. She was there only ten days, however, when she was seized with acute pain in the right side while in the needle bath and fainted. The second day fever developed with chills and irregular temperature. A diagnosis of pus tube made by the Hot Springs doctor and operation advised. She, however, preferred returning to Savannah. On admission to the Hospital, she looked very sick. She had a septic temperature. Her leucocyte count was 21,000.

Examination

Very sensitive lower abdomen with rigid abdominal muscles. By vaginal examination a mass could be felt in the right side, the size of a base ball, adherent to the pelvic wall and very tender. A preoperative diagnosis of ovarian cyst with pus was made. Operation was delayed five days to get the patient in better condition. This was successful.

On opening the abdomen a gangrenous ovarian cyst was found with obstruction at the pedicle. The cyst contained thin pus with no odor. The cyst was single with a pedicle but was adherent to everything in the pelvis by fresh inflammatory adhesions.

Although the greatest care was taken to remove the mass without spilling its contents, this could not be done, on account of the friable condition of the walls. After a long drainage this patient also recovered. This case evidently had complete torsion obstructing both artery and vein.

The third case is interesting, as it was in a child aged 3. This case was sent in from the country with a diagnosis of intussusception or appendicitis, or both. On admission, the child was quite sick. There was a mass in the right lower quadrant. The leucocyte count was high. Preoperative diagnosis of appendix abscess was made.

On opening the abdomen a cyst of the right ovary the size of a lemon was found. It was dark, almost black. There was a double twist in the pedicle with complete blocking of the circulation. The cyst wall was gangrenous with a surrounding adhesive peritonitis, but no pus. The tumor was quickly removed; a drain was thought advisable; remained for forty-eight hours and the child recovered without further trouble.

Another case I have had recently was a woman of sixty-five years, who was taken with severe pain in the right lower abdomen, and immediately became quite ill. On account of the rigid abdominal wall and the amount of adipose tissue, the correct diagnosis was not made in this case. On account of the severity of the symptoms and also symptoms of obstruction, a tentative diagnosis of intussusception was made.

Operation

A single large ovarian cyst with three twists in the pedicle with an adhesive peritonitis was found.

The other cases are not of this type but serve to illustrate the point to be emphasized in this paper.

Mrs. G., age twenty-four, had been having pain in the lower abdomen for several months; had seen a doctor who had pronounced her case ovarian cysts; said the disease was benign and that she could elect the time for operation, advice which always means procrastination and delay. Three months later, however, she came to me saying the pain was so bad that something must

be done.

Examination disclosed an irregular mass on the right side, not very sensitive to pressure, but vaginal examination was very painful. A diagnosis of proliferating ovarian cyst was made and advised immediate operation. This condition was found, but unfortunately, this delay of three months will probably prove fatal to this young woman, as it did in the case that follows. The papillomatous masses had already broken through the cyst wall, and were hanging in cauliflower-like festoons from both ovaries, and attached to the pelvic floor in some places both inverting and everting groups. Although a complete hysterectomy was performed with the removal of any apparent vestige of disease, the chances of secondary involvement in the peritoneum, and on the omentum or intestine in this type of case is very possible. The operative recovery was uneventful.

Three months after operation the pelvis is still clear.

A woman of forty had indefinite abdominal pain for a number of months but delayed examination. On examination a small proliferating cyst was found on the right side but on opening the abdomen it was found that it had not only broken through the cyst wall, but had grown over the uterus and pelvic peritoneum. Although as complete removal was made as quickly as possible, the disease continued to spread and death resulted six months later. This cyst of the epithelial type had already become carcinomatous.

Illustrating another point in a case I had last week. A Hebrew woman walked into my office saying she had sprained her side lifting something. Examination disclosed multiple tumors of the pelvis and a temperature of 101. At operation a few hours later a mass of degenerating inverting and everting proliferating tumors was found which would fill a hat; yet this woman in her broken English said she was never sick and had only strained her side a few days earlier.

Undoubtedly the most frequent accident happening to ovarian cyst is torsion, said to occur in ten per cent to twenty per cent

of all cases, and yet it is not often recognized before operation. The causes of torsion are numerous. When it is understood that these tumors are suspended as it were in the abdominal cavity, and are subject to displacement by exercise, falls, labor, or pressed upon by tight lacing, it is not surprising that torsion occurs. The severity of the symptoms depends upon the degree of the torsion and rapidity of the onset. It must be borne in mind that all cases of torsion do not result in strangulation. The abdominal pains that women have in one side of the pelvis, may at times be due to twists of the pedicle not sufficient to cause strangulation. These twists may untwist themselves or continue to twist more.

Gradual torsion obstructs only the vein, causes a thrombosis in the vein, but as the tumor swells by the engorgement produced and the increased secretion causes the tumor to grow rapidly larger, the obstruction to the arterial supply becomes complete with the attendant symptoms of gangrene of the walls of the cysts.

If the torsion is acutely complete, the patient is rendered acutely ill and the subsequent course stormy unless quickly relieved. It is surprising, however, how long these patients can go without relief and still recover, as instanced by the woman who travelled from Hot Springs seven days after the torsion took place, and was not operated upon until seven days after. This is due to the adhesive inflammation and cellular peritonitis about the tumor, causing it to become adherent to the pelvic floor, the intestines and omentum, forming a protective wall about the tumor.

When a cyst becomes septic, it is due to transmigration of microorganism through the inflamed intestinal wall or through the lymph channels. Rarely by way of the Fallopian tubes and very rarely through the blood channels. The principal reason that strangulated cysts do not more frequently become septic is the time it takes to organize the plastic lymph thrown out joining the intestinal wall to the wall of the cyst, for the lymphatic connection to be established, to carry the transmigrating micro-

organisms. Ten days to two or three weeks is required; fortunately most of these conditions come to operation before this time.

Proliferating cystadenomata on account of their tendency to break through the wall of the cyst cavity to form cauliflower-like growth extending from the tumor and attaching to surrounding structure, are the most dangerous of all cyst tumors. If, therefore, on bimanual examination, a small tumor of the ovary is felt, which seems to be irregular in outline with uneven density of structure the advice to the patient should be immediate operation; for unless taken early the chances for cure are lost.

Parovarian and interligamentous cysts are also subject to torsion but not as frequently on account of the larger pedicle. They also become septic in the same way as other tumors. Dermoid cyst on account of the long pedicle frequently becomes twisted. It is possible that simple cysts with broad pedicles may become septic without having had previously a torsion of the pedicle. When this happens it is due to an inflammatory exudate having formed about the tumor due to other causes.

Differential Diagnosis

It is not the scope of this paper to discuss differential diagnosis, but there are only two conditions which would confuse at all. These are extra-uterine pregnancy and acute inflammatory conditions of the Fallopian tubes. A careful anamnesis will usually compel the correct diagnosis. In children one point should be emphasized that sharp pains in the lower right quadrant does not always mean appendicitis; that slight twists or pressure of cyst may give a simulating pain and an ovarian tumor overlooked.

Sufficient has been said, I believe, to illustrate the point, that ovarian tumors, even of small size should not be considered of little consequence, because they are subject to accidents, such as torsion, sepsis, inflammatory obstruction, proliferation and carcinomatous degeneration; therefore, they are fraught with grave danger to the patient, and should come out of the class of elective operations and be put into one of imperative surgery.

DISCUSSION ON THE PAPER OF DR. T. P. WARING

Dr. O. H. Weaver, Macon.—I merely wish to emphasize one point Dr. Waring has already done in his conclusions, and the lesson I draw from the series of interesting cases which he has reported is found in that conclusion where he points to the importance of the removal of an abnormal growth, not only in the abdomen, but in any part of the body. It is a lesson that has been taught us for years, and yet it seems we do not profit by it as we should. With any abnormal growth in the body, surely the patient is better off without it, and, unless there is some absolute contraindication to its removal, the best advice a doctor can give is to remove it. In the cases presented by Dr. Waring there were a number of instances where a simple growth suddenly became very serious and dangerous to life. This applies not only to cysts of the ovary, but to fibroids of the uterus and growths in the breast. I might go further and speak of innocent growths of the skin which ultimately, if not removed, result in malignancy.

Dr. Everard A. Wilcox, Augusta.—One of the principal points in the management of these tumors is just how we should go about taking them out. We seldom see huge tumors nowadays except in neglected cases. Even though the tumor be large it is far safer to make ample incision and deliver the tumor intact. It is better not to try to aspirate the contents for fear of contaminating the peritoneum with cell-containing fluid which will produce implantation metastases and recurrence. It is sometimes impossible to distinguish between a benign cyst and the dangerous papillary adenocystoma. The pseudo-mucinous cysts are multilocular, and contain jelly-like material too thick to aspirate. They may be recognized by their peculiar dark blue, sometimes multi-colored appearance, and the fact that they are unilateral. The dangerous papillary cystoma is commonly bilateral. Before doing anything we should inspect both ovaries and look for papillary outgrowths. If the operator decides to aspirate, let him exercise great care not to spill one drop of the fluid contents into cavity or wound. If the tumor has invaded its capsule and presents papillary excrescences over its surface and on the peritoneum, there will be a recurrence, and sometimes a rapid developing ascites will announce the presence of secondaries before we can feel them. I believe it is safer to remove the tumor intact through no matter how large an incision, than to run the risk of implantation secondaries caused by the spilling of cyst contents. The cyst which contains fluid thin enough to aspirate is the serous cyst which should never be aspirated.

Dr. Thomas S. Jones, Jefferson.—There is one point I wish to emphasize in connection with Dr. Waring's paper, and that is the diagnosis of ovarian cysts with twisted pedicle. I refer to that

class of cases in which they have a twisted pedicle and it untwists. These patients come to us with a pain in the abdomen; they may or may not have temperature. The temperature is hardly ever above 100. There are no leukocytes. The urine is normal, but they have a sudden sharp severe pain in lower abdomen, and after the cyst or its pedicle untwists itself, the pain disappears. There are quite a few of these cases. I have seen four in the last five or six years. They are difficult to diagnose because we do not think of them. When a woman comes to you in that condition you think of a fibroid or you may not feel the cyst at all because some of these cysts cannot be felt. From the clinical history, the blood findings and symptoms you suspect that the woman has a tumor that has twisted upon itself and has become untwisted. I saw such a patient not many days ago in which that occurred half a dozen times before she came to operation.

Dr. Lawrence Lee, Savannah.—There are two points I want to bring out and emphasize in Dr. Waring's paper, one of which is the difficulty frequently attending the diagnosis. I wish to report a case in which I failed to make a correct diagnosis in a child, five years of age, who was brought to the hospital. At the time I saw it, it had a general peritonitis; the abdomen was rigid, and on this account and because the child was nervous and cried, I did not feel a mass in the abdomen. As she had a high temperature and the pain was right-sided, I made a diagnosis of acute appendicitis with general peritonitis. On opening the abdomen I found the appendix moderately inflamed, but it was evidently not the cause of the general peritonitis. The abdomen was full of pus. I closed the wound, made a median incision, and found an ovarian cyst the size of a lemon with a twisted pedicle. The child recovered as these cases usually do, because the type of infection is usually not virulent.

It is not easy, as the doctor seems to have represented, to always know what to do in a case of ovarian tumor. It is not unusual to examine a woman with a small ovarian tumor and at operation find an ovary full of small cysts and frequently both ovaries involved. It is hard to decide how much ovarian tissue to remove. I believe in conservation of the ovary wherever possible. It is not always an easy matter to decide on the removal of the ovary. Of course, when there is a cyst with a twisted pedicle, it is a different matter.

Dr. B. H. Wagnon, Atlanta.—I want to speak just a minute or two on twisted pedicle cysts. The title of the paper of Dr. Waring was tumors of the ovary of all types, but he confined himself largely to the twisted pedicle cyst.

It has been my experience to come across a twisted cyst which was very large, containing to begin with probably one-half to three-quarters

of a gallon of straw colored fluid. In this case there were two twists of the pedicle which came on suddenly, and the patient was taken with severe pain accompanied by marked shock. The doctor who was called to attend the patient at the time made a diagnosis of ruptured ectopic pregnancy. When the abdomen was opened and the cyst delivered, it was found gangrenous. The fluid at the time was in the lower part of the cyst. She had lost considerable amount of the fluid.

Ovarian cysts that we find in these cases are many times bilateral. I have found them to range in size from a marble to a lemon, and have found them on both sides of the ovary usually. All Graffian follicle cysts or simple retention cysts have a thin, clear, straw colored fluid. I agree with the previous speaker that these ovaries should not be molested, but the contents of these cysts should be evacuated, and the woman allowed to go on and retain her menstrual function throughout her regular time.

I have had trouble in making a diagnosis of twisted pedicle cysts that varied in size from an orange to a dime. I have found that dermoid cysts give considerable trouble in making a diagnosis from twisted pedicle cyst because they give pain especially on pressure on examination.

Another tumor of the ovary which should be spoken of, and which occurs in four-tenths per cent. of all tumors of the ovaries I have come in contact with is sarcoma of the ovary. I have found sarcoma of the ovary in that percentage of cases. We all have come in contact with papillomas of the ovary, and I have nothing to add to what Dr. Waring has had to say except they are bound to recur. A condition of the ovary, which is not a true cyst, I have found to be mostly abscess of the ovary. I have, within the past year, had a goodly number of large ovarian abscesses the result, I expect, of Neisseria infection.

Dr. Waring (closing).—I wish to thank the gentlemen for discussing my paper so freely. Without due consideration of the pathology of these tumors, it is impossible to get a proper line upon the diagnosis of them in their early stage. Also, in some of these tumors it is hard to know what to do with them. I mention the fact that corpus luteum cysts, tumors, and follicular tumors of the ovaries often go away. You will find them on first examination, but if you examine the patient again in a week or two you will be much surprised to find they have disappeared. Something happens to them. Blood gets into them, they rupture and disappear. If you meet such a cyst on first examination and the patient is not apparently sick, perhaps it would be well to delay treatment to find out whether it was of that type.

I am obliged to Dr. Wilcox for bringing out the point about the pathology. However, it is incorporated in the paper, but the time was too

short to read it. If I had read it, it would have given you a much clearer insight into this type of tumors and what to do with them by being able to place the pathology of each individual case. It is not the large tumors that bother us so much; we know what to do with them. They are the pseudomucinous kind, and they are the multiple cysts that usually break down into one and are easily removed, and there is not much to be said about them except that often these tumors contain in their inside papillomatous growths of another type, and the point he brought out of removing the contents of these large tumors carefully so as not to soil the peritoneum is an important point in our surgical work.

Dermoid cysts are subject to twists I suppose more than any other type of ovarian tumor. They usually have a long pedicle. They are usually of small size, remain dormant for years, and they are of the typical kind where you get sudden severe symptoms of pain and discomfort in the side. They occur in from 10 to 20 per cent. of the cases.

VITAL CAPACITY READINGS—THEIR VALUE IN CLINICAL MEDICINE*

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Savannah, Ga.

Four years ago at a meeting of the Southern Medical Association in Asheville, N. C., I had the pleasure of hearing Dr. Joseph H. Pratt, of Boston, discuss the Clinical Value of Vital Capacity readings; the subject was entirely new to me, but most attractive. I at once became interested, and after talking the matter over with Dr. Pratt, returned home with the intention of using this aid in diagnosis, especially in Cardio Vascular Renal Cases—and in cases when the functional strength of the myocardium was in question.

The spirometer reading is now a part of my general physical examination. I find the Vital Capacity reading a pretty good index of one's general condition. As to physical endurance the spirometer measures the capacity of the lungs, also the functional strength of the myocardium. In myocarditis it is subject to a marked increase, as the general physical condition of the patient improves. Vital Capacity means the maximum quantity of air that can be expelled from the lungs by voluntary effort, after taking the deepest possible inhalation.

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The object of this short paper is to bring the subject to the attention of the Association. The test is simple, does not require any special skill, and the outlay for a spirometer is small. The spirometer in a practical way, is used in a good many Government Hospitals, Gymnasiums and Cardio-Vascular Clinics. Various tables have been computed by many observers under different conditions, and vary somewhat, but for practical purposes the tables prepared by Dr. Joseph H. Pratt, from Hutchinson observation will be all that is necessary for working use.

Feet to Inches.

5	5-2 Vital Capacity in Centimeters . .2990 c.c.
5-2"	5-4 Vital Capacity in Centimeters . .3150 c.c.
5-4"	5-6 Vital Capacity in Centimeters . .3400 c.c.
5-6"	5-8 Vital Capacity in Centimeters . .3725 c.c.
5-8"	5-10 Vital Capacity in Centimeters . .3950 c.c.
5-10"	6-ft. Vital Capacity in Centimeters . .4300 c.c.

The maximum Capacity was found between the ages of 25 and 35 years, but it was almost as great between 15 and 25 years of age. A marked fall occurred after 45 years of age, and at 55 to 65 it dropped to 71 per cent. The following table shows the influence of age on Vital Capacity—(Hutchinson).

Age.	Vital Capacity in Centimeters.
15-25	3425
25-35	3500
35-45	3225
45-55	3025
55-65	2850

Women average about 20 per cent less than men.

Just why the Vital Capacity of the lungs is decreased in Cardiac disease is not evident as it is in diseases of the respiratory organs.

An editorial in the A. M. A. February 25th, 1922 deals with the pathology as follows:

Of one hundred and twenty heart cases studied by Ulrich and Mathewson, as reported in the Minnesota Medicine, cardiac disease was found in eighty-four, only 60 per cent, the remaining 36 cases were cases of neurasthenia, effort syndrone, and cardiac neurosis. In an individual presenting symptoms which might be referable to an impaired heart, the Vital Capacity assists in determining whether or not any cardiac involvement is present.

In cases in which the presence of cardiac lesion is definitely known it gives a fairly

accurate estimate of the functional capacity of the heart. As a rule the lower the Vital Capacity the poorer the prognosis.

Vital Capacity readings also give an index of the results of the treatment and show whether the tolerance for work is increasing or diminishing. Personally, I have begun to consider the spirometer of considerable help in a general diagnostic survey, of the past, present, and future of a cardiac case—from a diagnostic and functional view. point.

My observation of office cases has been the functional result of a heart is in direct proportion to a high or low reading. In cases of cardiac neurosis I have found practically no reduction of spirometer reading. The spirometer reading varies little in a person in good health.

There are patients with cardiac disease in whom the Vital Capacity is reduced by one third or more—although such physical signs as pulmonary oedema effusion, hepatic enlargement and similar factors sufficient to account for the degree of disease are entirely wanting. Such cases have often proved to be a puzzle from the standpoint of scientific interpretation. Recently experiments conducted by Dreker, Peabody, and Blumgart at the Medical School of Harvard University, offer a possible clue to an explanation.

They have shown that intravascular blood can encroach markedly on the pulmonary air space. Thus when a high degree of pulmonary stasis was brought about by obstruction to the pulmonary veins, changes in ventilation, a decrease in vital capacity ensued. Release of pressure on the veins resulted in a return to the previous normal condition; in other words, the experiments show that if pulmonary veins are obstructed to such a degree that congestion of the pulmonary vessels is produced, there results an interference with the entrance of air into the lungs, which is relieved as soon as the obstruction is removed.

To determine in terms of percentage the relation between the vital capacity of the lungs and the clinical aspect of heart disease, was the object of experimental work begun a few years ago by F. W. Peabody.

Dyspnoea, a general symptom of heart disease and a good index of the reserve powers of the heart, may be caused by the failure of the heart to provide adequate flow, as well as failure of the lungs to properly aerate the blood.

In general, the author states the lower the vital capacity of the lungs, the greater the tendency to dyspnoea, with the patient at rest in bed a fairly accurate estimate can be made of the amount of exercise he can undertake without dyspnoea.

If normal he will have no more dyspnoea than will normal individuals, if it is between seventy and ninety per cent of the normal he will be dyspnoeic on moderate exercise but can lead a quiet normal life.

If between fifty and seventy per cent normal the activities must be extremely limited to avoid dyspnoea and if under fifty per cent the patient will be practically bed-ridden.

Many types of cardiac function tests are in use—and none of them with the *possible exception* of the Vital Capacity test is satisfactory.

Most of these are exercise tests of one kind or another but for the sake of prognosis one must be able to give information as to whether the patient can perform ordinary duties.

The respiratory endurance or fatigue test used in the British Army during the war consisted of measuring the time the individual can hold his breath is probably next in importance to the Vital Capacity test.

However, McKenzie states a careful history of the response to physical effort on the part of the patient is by far the most effective test of the cardiac function we have.

Polygraphic and Electro—Cardiographic tracings are of little or no value in determining the functional capacity of the heart.

The method of determining vital capacity is easy, one that every doctor can make without difficulty and, therefore, all the more to be recommended.

I commend the spirometer as a practical aid in determining the functional capacity of the heart, and its simplicity recommends itself.

DISCUSSION ON THE PAPER OF DR. RALSTON LATTIMORE

Dr. J. M. Anderson, Columbus.—I am very much interested in, and have been for the past two years, the vital capacity spirometer, the pulse wave recorder and the metabolism apparatus. I would like to say, however, in regard to the pulse wave recorder and the metabolism recorder that unless you have a technician, or you are a technician yourself, you may not as well have these instruments. The reason for that is because their operation is intricate and difficult. It is not difficult if you understand it. If you do not work at it quickly it is no good at all. On the other hand, the vital capacity spirometer can be used in a minute and you are through with it, and it does give you some valuable information. After all, no matter how much office equipment we have, the best office equipment is brains. Outside of the stethoscope, the vital capacity spirometer is probably as important as any other kind of office equipment.

Recently, in my home town (Columbus) I heard a lecture in which the speaker went through the process of first exhaling all air from his lungs, and then he inhaled pure hydrogen gas. He first repeated to the audience, "Mary had a little lamb," etc., in his natural voice. When he got the hydrogen gas into his lungs he went along without willful effort to change his voice and said the same thing, "Mary had a little lamb, its fleece was white as snow, and everywhere that Mary went the lamb was sure to go," in a very high tone. This man claimed that, in addition to the vibration of the vocal cords, it was the medium in which the vocal cords vibrate that made each person's voice different. In addition to the vocal cords being different, the expired air in each person is different. It seems to me the thought is worthy of further consideration.

It occurred to me that if it were possible to analyze the expired air and know exactly what it contains, we would be getting valuable information. I do not think that has been done here.

Dr. Louis M. Warfield, Ann Arbor, Michigan.—I think after all, when we come to measure what is going on in the body, it is not so much what the pathologist finds when he looks at the organs in the dead-house, as it is what the individual is able to do with the organs in his body, in other words, function is more important than structure.

I was very much interested in Dr. Lattimore's paper. I think it is timely, because, as he rightly says, there is not any method at the present time which we have found perfectly satisfactory for the purpose of measuring the functional capacity of the heart. When we come to talk about the question of laboratory apparatus and instruments, as I had occasion to say last evening, one can scarcely include in the list I gave such a minor

and useful instrument as this which one can use himself in a few minutes. Vital capacity has been worked over very much in the last four years. It was started in Europe, and in the hands of Peabody and his associates in this country it has been found of great value in the determination of the functional capacity of the heart.

After working with the vital capacity for the last three or four years, as I have done, it has seemed to me possible to use it as an aid in diagnosing early cases of pulmonary tuberculosis. Even very early cases show a very definite decrease in the vital capacity. The only difficulty about vital capacity readings is that our standards are not yet as accurate as we would like to have them. Some make a standard on the weight and full height of the individual; others on the weight and trunk height. While these standards are not as accurate as they might be, nevertheless, there is tremendous value in the vital capacity as applied to heart disease, and in the second place, probably it is of great value in the diagnosis of early pulmonary tuberculosis.

The simplicity of the estimation adds greatly to its value as a routine procedure.

Dr. Stewart R. Roberts, Atlanta.—When Dr. Barringer, of New York City, read his paper on Heart Tests before the American Medical Association and impressed me with its almost tiresome complexity, I said to myself, how often each one of us, whether surgeon, internist, diagnostician, or practitioner asks himself subjectively this question, "What is the power of this patient's heart?" "What is its condition?" "What can it do?" "What can it stand?" It is a difficult question to answer in certain cases.

In Osler's time he lived through the period of murmurs and mechanical conditions of the heart. In the last ten years we have been through the period of arrhythmias of the heart and accent has been placed upon the polygraph and the electro-cardiograph. We are now coming, as Dr. Warfield has said, to the period of functional power of the heart, and there could have been no more timely paper than this one of Dr. Lattimore's to call our attention to the fact that we have, even if grossly and even if roughly, in the office a general estimate of the functional power of the heart muscle. Those who are experts know that breathing capacity is directly related to myocardial power as expressed through the readings of the spirometer.

Dr. Warfield has called our attention to the differences in the tables and the different bases on which they are constructed. One way we have

tried to get around this in our office is to make it more or less consistent by having all readings made with the patient seated and to breathe a little before hand to get accustomed to the room. I have not found any inconsistent readings with the spirometer as related to our physical examination. If I were an operating surgeon, I should want a physical examination made of the patient, including blood pressure readings, urinary examination, a hemoglobin reading, and a spirometer reading. I believe surgeons will find the spirometer of great spiritual assistance in giving them encouragement to do surgical operations. We can also say that in our brief experience with the instrument it gives an idea as to the effect of rest, diet, digitalis therapy, and so on, on the patient.

I would like to call attention to the fact that we had a patient from the hospital die of myocardial insufficiency without any murmur whatsoever throughout the entire length of his illness, and the spirometer readings taken every two or three days showed a gradual concomitant decrease in the vital capacity as a symptom of myocardial insufficiency. His myocardial power increased as the vital capacity readings increased, and as the myocardial power decreased, the vital capacity decreased, and as Dr. Lattimore very well summarized, holding the breath test, vital capacity readings, are simple questions as to what exercise the individual may take, what activities he can undertake without any circulatory embarrassment. These are very simple and very necessary questions.

Dr. Latimer, closing.—At the Congress of Internal Medicine in Philadelphia, three weeks ago, in an able paper on the Dangers and Duties of the Hour, I heard Dr. Herbert A. Hare, of Philadelphia, say that about twenty-five years ago nearly all the teaching in the medical colleges was didactic.

Then came the combination of clinical and didactic teaching which seemed about ideal, and remained so for years; then, some seven or eight years ago, laboratories came into prominence, and especially in the last two or three years practically absorbed both didactic and clinical teaching.

Laboratory findings are helpful, but only bits of evidence to be considered in diagnosing and caring for patients.

I do not consider the spirometer a part of laboratory teaching. It is just as simple and necessary to use as a routine in our office work as blood pressure readings.

A STUDY OF SYMPTOMATOLOGY IN NEUROSYPHILIS WITH ESPECIAL REFERENCE TO EARLY SUBJECTIVE AND OBJECTIVE MANIFESTATIONS*

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The late lamented Dr. E. E. Southard, of Boston, introduces his material on Neurosyphilis with the following lines from *Paradise Lost*:

Me miserable! which way shall I fly
Infinite wrath and infinite despair?
Which way I fly is Hell; myself am Hell;
And, in the lowest deep, a lower deep
Still threatening to devour me opens wide,
To which the Hell I suffer seems a Heaven.

This perhaps expresses in some measure the point of view the patient to whom is given the insight to realize the plight in which he finds himself as victim of neurosyphilis.

The study herewith presented is based upon sixty-nine cases of neurosyphilis selected from cases of this kind which have occurred in my private practice during the past five years.

Because of the seriousness of the disease, because of its frequency, and because of the importance of its early recognition, I venture to present these studies of the early subjective and objective symptoms which should always excite suspicion in the minds of the physician of the presence of this disease.

A—Early Subjective Symptoms in Terms of the Complaints of Patients

The following symptoms were listed from the sixty-nine cases; Unsteadiness in walking, fatigue in legs, attacks of unconsciousness, insomnia, mental depression, confusion of ideas, periods of loquacity, backache, lan-

inating pains, sensory changes, anesthesia and paresthesias in limbs, ataxia, weakness of vesical sphincter, nervousness and irritability, change in character, grandiose ideas, hemiplegia with aphasia, euphoria, vertigo, numbness in different parts of body, memory impairment, diplopia, epileptic attacks, status epilepticus, girdle sensations.

It might be noted that some of these are very definite symptoms, such as attacks of unconsciousness, difficulty in walking, while others are rather indefinite, such as nervousness, irritability, paresthesias. It is also to be noted that some of the symptoms are of a purely physical character, whereas others are distinctly mental, such as grandiose ideas, mental depression, mental impairment, character changes which are usually in the nature of a slump. It is noteworthy that many of these latter symptoms are not appreciated by the patient but are very distinctly noticeable to the family and friends of the patient.

The complaints of patients which I have enumerated above are confined entirely to those observed in my own series of cases. Many additional subjective symptoms have been described and one is tempted to say in general that one hundred consecutive cases of neurosyphilis might easily show one hundred different clinical syndromes. As Jelliffe remarks this multiplicity of syndromes in neurosyphilis has been a commonplace of neurology for many decades.

B—Early Subjective Symptoms in Terms of Pathological Anatomy

Studies in the pathology of neurosyphilis, which have now reached an enormous volume, show that the central nervous system is primarily involved in three ways:

- (1) The meninges
- (2) The blood vessels
- (3) The parenchyma or nerve substance itself

We thus have the three types described as meningeal, vascular and parenchymatous. In the great majority of cases, however, there is a combination of these primary

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types which may be described as meningo-vascular, vasculo-parenchymatous, and finally the diffuse form where the meninges, blood vessels and parenchyma are all involved.

It is of definite value to bear in mind the pathological picture in dealing with the clinical aspects of the disease.

C—Early Subjective Symptoms in Terms of a Clinical Classification

The classification here presented is essentially based upon the pathology, and a differentiation of the types of neurosyphilis is of the greatest value in prognosis and treatment. There appear to be six well defined forms:

(1) Diffuse Neurosyphilis (Non-vascular forms of cerebrospinal, cerebral and spinal syphilis)

(2) Vascular Neurosyphilis (cerebral arteriosclerosis)

(3) Paretic Neurosyphilis (Paresis)

(4) Tabetic Neurosyphilis (Tabes)

(5) Gummatous Neurosyphilis (Gumma of brain or of the membranes)

(6) Juvenile Neurosyphilis (This may assume the paretic, tabetic or diffuse form).

To summarize the frequent symptoms both subjective and objective of the clinical forms just enumerated is, I feel, important.

Forms 1 and 2, diffuse and vascular, are frequently so similar in their symptomatology that they may be considered together, they include pupillary changes, headache, vertigo, insomnia, drowsiness, character changes, paralysis of various types, permanent or transient, aphasia and sphincter disturbances.

The paretic form includes such physical symptoms as headache, visual disturbance, tremor, speech and writing disorders, pupillary changes, reflex changes, epileptic and apoplectic seizures, mental symptoms, particularly changes in conduct, lack of insight, irritability and impaired judgment.

It should be emphasized at this point that there are no characteristic mental symptoms of paresis and that any type of mental disturbance renders it necessary to keep paresis in mind as a possible cause.

The fourth, or tabetic form of neurosyphilis, has frequently been stated to be the richest in clinical symptomatology of any disease entity. Perhaps the most constant and striking symptoms are ataxia, lancinating pains, absent knee jerks, pupillary disturbances and sphincter disturbances. I wish to emphasize the frequency with which an erroneous diagnosis of rheumatism is made on account of the pains, and how easy it is to confuse the gastric crises with surgical disturbances of the abdomen.

The fifth form is the gummatous type which in my experience is not common. This form frequently simulates brain tumor and the symptoms and signs depend largely on the location of the gumma.

The sixth type is the juvenile type where the disease appears before puberty, usually being congenital, although occasionally acquired from accidental extra-genital infection. The symptoms and signs simulate the paretic, tabetic, and diffuse forms.

It might be said in general that the bulk of cases of neurosyphilis are made up of the diffuse and vascular forms considered together, the paretic form, and the tabetic form.

The value of studying the symptoms is that such study tends to lead to the early recognition of neurosyphilis. To this end suspicion must first be aroused in the mind of the examiner and then the suspicion either confirmed into certainty or ruled out.

D—Early Objective Manifestation of Neurosyphilis

These may readily be divided into clinical signs and laboratory findings.

Of the clinical objective signs the most important and earliest are pupillary changes and disturbances of the deep reflexes most commonly the knee jerk and ankle jerk.

In the early stage of the disease the changes in the pupils are mild in degree and consist of slight myosis or mydriasis, inequality, irregularity, or sluggishness in direction or consensual reaction to light.

The knee and ankle jerks present either exaggeration, definite diminution or more rarely inequality. It should be emphasized,

however, that all of these objective signs may be lacking in the disease.

The second important objective manifestation is the evidence furnished by the laboratory.

The blood Wassermann should always be done. If positive, it is confirmatory, if negative, no conclusions can be drawn. This latter statement I can strongly emphasize.

A spinal fluid examination should be made in every case where there is the slightest suspicion of neurosyphilis. An examination of value includes a Wassermann test, using in the test as much as one cc. of the fluid if smaller amounts are negative. At least three antigens should be employed. It includes also a cell count, an estimate of globulin content and report of the colloidal gold curve and of the sugar content of the fluid.

A large proportion of the cases of neurosyphilis show a negative blood Wassermann but positive spinal fluid Wassermann. A cell count of more than ten per cu.mm. is abnormal and means inflammatory reaction. If the Wassermann is positive it is justifiable to conclude that syphilis is the cause of the inflammation. The globulin content when increased has the same significance as the increase in the cell count.

The colloidal gold curve appears to be of very definite value in differentiating the paretic form from the other forms and thus of decided prognostic value. The sugar content appears to be low when syphilis is present.

A study of the spinal fluid in my series has impressed upon me its great importance. Time forbids more than a few remarks on this interesting aspect of the subject. In seventeen cases the blood Wassermann was negative while the spinal fluid was positive. In five cases the spinal fluid was negative and the blood Wassermann positive. In thirty-six of the cases where accurate cell count of the spinal fluid was made the number of cells per cu.mm. varied from twelve as the lowest number to 170 as the highest number. The average number of cells in the thirty-six cases was sixty-three. In forty-one of the cases where globulin content was esti-

mated there was an increase reported in all but one of the cases. Such findings reveal the great value of a study of the spinal fluid in all cases where the subjective and objective symptoms point to the possibility of neurosyphilis as the cause.

The history of syphilis is, of course, of some help in diagnosis where positive. In my series of cases, 31, or nearly 50 per cent gave a positive history of syphilis, 17 gave a negative history, 11 gave a doubtful history and in 10 cases for various reasons the history was not obtained.

The following summarized illustrative cases from my series are presented to illustrate the importance of investigation of suspicious symptoms of neurosyphilis:

(1) Tabetic neurosyphilis:

A business man, age fifty-six, was first seen by me Sept. 1922. In 1917 he consulted his family physician on account of bed wetting (vesical sphincter weakness). The possible meaning of such a symptom was not realized. Later he complained to another physician of the additional symptom of girdle sensations in the regions of the chest and even later of lancinating pains and unsteadiness in walking. It was not until several years had elapsed that the correct diagnosis was made. An interesting point in the history of this patient is that the first spinal fluid examination showed a negative Wassermann, although 80 cells were present. Three subsequent spinal fluids have all shown a four plus Wassermann reaction. It might be stated that the cell count has been much diminished and marked clinical improvement secured by intraspinal therapy. The patient had previously received at least thirty (30) injections intravenously of salvarsan without any improvement.

(2) Juvenile neurosyphilis:

A boy age eight and one-half years was seen first in Jan. 1921 on account of severe epilepsy. One is tempted to regard epilepsy as always of the essential or idiopathic type. It is, however, important to study the spinal fluid in every case of epilepsy. In this case the only objective symptom of syphilis was a syphilitic iritis and a posi-

tive blood and spinal fluid. The cell count of the fluid has varied in different examinations from 55 to 10. In this case, intraspinal therapy has rendered the spinal fluid Wassermann negative in the last two examinations and there is definite clinical improvement.

(3) Paretic neurosyphilis:

A woman, age forty, was seen January, 1922, on account of mental irritability, restlessness, insomnia, periods of depression and lack of interest in her surroundings. It was not suspected that syphilis was in the background. In this case there was practically no reaction of the pupils to light either directly or consensually and the knee jerks were exaggerated. The blood was four plus as was also the spinal fluid. This patient has shown a persistently positive spinal fluid Wassermann, a persistent paretic type of curve in spite of vigorous combined treatments both intravenously and intraspinal. Apparently she is enjoying a remission which one could not dare to assert is to be permanent.

(4) Diffuse neurosyphilis:

A young man, age 29, was first seen in May 1921, who in 1920 first began to complain of dead feelings in different parts of the body, of general nervousness, insomnia, mental depression, difficulty in thinking. There had been, on the part of the family and his physician, not the faintest suspicion of syphilis. The only objective symptom was a marked inequality of the pupils, the left being almost double the size of the right and a failure to react to light on the part of both pupils. The blood Wassermann was strongly positive as was also the spinal fluid, with 22 cells per cu.mm.

This patient has improved very decidedly under intraspinal therapy, being now able to return to work with a negative spinal fluid Wassermann, 12 cells per cu mm., and the pupils apparently equal in size. The patient is apparently relieved of his subjective symptoms.

Summary and Conclusions

Neurosyphilis is an exceedingly common result of syphilitic infection in general. The

most recent studies appear to show that in 20 to 25 per cent of all cases of syphilis, the nervous system is involved. Of these a certain proportion do not present definite symptoms but the invasion of the nervous system can be ascertained by spinal fluid examination. It appears desirable to advise such examination in all patients who have had syphilis. If positive, the patient is a candidate for clinical neurosyphilis and should receive vigorous and appropriate treatment. Another objective symptom is a persistently positive blood Wassermann after thorough treatment in early syphilis. J. E. Moore of Baltimore, from his studies of about 1000 cases of early syphilis, concludes that a permanent negative blood Wassermann occurs by the sixth weekly dose of Arsphenamin in the majority of all cases of newly acquired syphilis. If the blood Wassermann is still positive after a second course of Arsphenamin plus mercury in the interim a careful search for the cause is begun, paying especial attention to the osseous, cardio-vascular and central nervous systems.

Perhaps the very earliest subjective symptoms of clinical neurosyphilis are headache, insomnia, vague neuralgia like pains indefinitely located and general nervousness. The most important objective early signs are pupillary changes which often demand close examination for detection, and changes in the deep reflexes. Finally the laboratory confirmatory signs are positive blood Wassermann, particularly if persistent after thorough treatment, and positive spinal fluid findings. It should be stated, however, that all laboratory findings may be absent in the presence of some forms of neurosyphilis. In such cases a careful search for objective clinical symptoms would be a determining factor in diagnosis.

From the study of sixty-nine cases presented herewith the impressive points are the multitude of the subjective complaints, the constancy of pupillary changes as an objective symptom, and the great value of careful repeated spinal fluid examinations. 65 Forrest Ave., Atlanta, Ga.

DISCUSSION ON THE PAPER OF DR. LEWIS M. GAINES

Dr. Joseph Yampolsky, Atlanta.—I have studied 300 cases of neurosyphilis in children. Our practice has been to do lumbar puncture in every case where the patient has a positive Wassermann or has shown signs of congenital syphilis. Those cases which do not show any signs of neurosyphilis give a negative Wassermann every time, but occasionally a spinal Wassermann shows an increase in cells and one plus, but this is not significant because these patients without treatment clear up completely.

In cases of neurosyphilis, I recall two cases of epilepsy that gave a positive spinal Wassermann reaction, and also gave a positive reaction to the gold colloidal test. We have had two patients of the juvenile type that had definite changes in the eye, a diagnosis having been made by an eye man of chorioretinitis. After that time we had a spinal Wassermann made in every case where congenital syphilis was suspected.

Dr. L. F. Lanier, Rocky Ford.—About four years ago there came under my observation a man who had been a turpentine operator for something like twenty years. His trouble began when he was about thirty years of age and lasted until he was forty-two when he died.

He would ride through his turpentine plantation daily on his inspection tours, fall asleep on his horse, wake up and then fall asleep again. Sometimes he would have to get off of his horse, lie down on the grass for a while, have his nap out, get up again and still be annoyed with those sleepy spells. He went to see doctors in Florida and Alabama and could not get any relief. Suspecting the trouble I took him to a prominent hospital in Georgia, and the blood Wassermann was found to be weakly positive; at the same time the blood Wassermann from the Georgia State Board of Health was negative. His systolic blood pressure was 186, and diastolic 140.

Because of the difference of the two laboratories I did not feel justified to push 606 or even to use any of the Mercurials, though I found that plenty of calomel and sometimes protoiodide seemed to help him—and just here—try protoiodide in one or two doses a day on some of your lady patients suffering from constipation—you will very often get results—even where there is negative Wassermann. I insisted on my patient having spinal puncture, he was afraid despite my assurance. Another twelve months went on, he became worse having those sleepy spells more frequently; he would all of a sudden lose control of his limbs and speech, have to sit down in a chair, be perfectly conscious of what was going on around, make a terrible effort to speak, his folks would slap him in the face with a wet towel, and in three to five minutes the spell would leave him and he

would be just as strong as ever and be all right the balance of the day.

On a business trip to Florida one of these attacks assumed an anginal phase, a physician was called in and gave him the proper relief, staying with him a couple of hours; next day, the doctor told him he did not know what the trouble was but that he would have died had he not gotten relief at the time he did.

As above said the spells were growing worse, he came to me and agreed to a spinal puncture; same was made at one of the leading hospitals of the state, in fact the same one that made the blood Wassermann the year before. The spinal Wassermann was three plus. I, with the assistance of the hospital, had found the trouble. They gave him one intravenous injection of Neosalvarsan without any bad effects; he came home, the next week. I gave him one without any bad results; the next week I was off in the country looking after a patient. That morning the gentleman was down talking to a group of men, apparently all right. He went home at 11 o'clock, had what seemed an anginal attack or of indigestion, the other doctor attending, as I was in the country. (It was not indigestion.)

The doctor administered the proper relief measures at that time but the young man turned over and died. The undertaker found the axillary artery of right arm had burst. Diagnosis—Neurosyphilis.

Dr. Charles E. Dowman, Atlanta.—It is a very important thing for a subject of this nature to be brought to the attention of the Association on account of the frequency of neurosyphilis.

About a year ago I had occasion to review 600 cases, sent to me as private cases, as potentially neurosurgical problems. Of the 600 cases, there were 60 verified as cases of syphilis of the nervous system or ten per cent. A study of these 60 cases gave practically the same general findings as mentioned in Dr. Gaines' paper in the study of his series. There were a few interesting things brought out in the study of these sixty cases, one particularly in regard to the systolic blood pressure. In the records of the examination the systolic blood pressure was recorded in 42 of the 60 cases. In only eight of these cases was the systolic pressure over 145. As opposed to that, there were eight cases where the systolic pressure was below 110. Of those over 145 there were only two cases of really abnormally high pressure, namely, one at 195 and the other 220. It is an interesting observation because up to the time of the study I was under the impression that syphilis of the nervous system was accompanied more or less by increase in blood pressure. Most of the cases showed no greater blood pressure than the average case.

Another interesting thing was the laboratory findings in regard to glucose in addition to the things Dr. Gaines mentioned. It was found in practically

all cases there was an absence of glucose in the spinal fluid. Some of these cases were treated by myself and others by other practitioners. The spinal fluid findings varied, and as the patients responded clinically to treatment the glucose content of the cerebrospinal fluid went up but quickly fell. Dr. Kelley, of Atlanta, has come to the conclusion that a careful study of the glucose content of the cerebrospinal fluid may serve as a prognostic aid as to whether patients are responding to treatment or not. Of the sixty cases, ten per cent. of the series came to some form of operation, principally for the relief of choked disc in order to conserve sight. There is one child who became totally blind; it had marked choked disc, and after a decompression operation sight began to return in about a week, and six months later examination of the eye grounds failed to reveal any abnormality whatsoever. In addition, the child has been put on treatment.

Dr. Newdigate M. Owensby, Atlanta.—It has been a real pleasure to hear the paper Dr. Gaines presented with the symptomatology of syphilis in such a concise and yet thorough way. He has brought out three points that are most essential. First, neurological and laboratory examinations; second, the importance of the spinal fluid examination when the blood is negative. I have found in a great many cases the blood was negative, where the spinal fluid was markedly positive. In those cases he mentioned, where they have no history of syphilis, they may present certain clinical symptoms. I have had two cases come under my observation, one a most charming woman of middle age who presented the clinical symptoms of syphilis of the nervous system, yet there was absolutely no history of such. A spinal fluid examination confirmed the clinical diagnosis and the clinical symptoms. The only history I could get of that case was that some twenty years ago she was particularly interested in orphan asylum work. There were quite a few children that she hugged and kissed, and subsequently she developed a sore on the lip, which was the initial lesion.

The other case, a young boy, developed epilepsy. The spinal fluid showed the conclusive findings of syphilis, yet the spinal fluid of the father and mother was absolutely negative. It was stated that when a child the boy had a history of having had a rosary which led me to wonder if he had not become infected along with a few other children and developed symptoms of neurosyphilis, yet with no history of the disease condition.

Dr. Elton S. Osborne, Savannah.—I was glad Dr. Gaines emphasized the subjective symptoms. It seems to me, in these days we are apt to lose sight of the subjective symptoms to a large extent. They seem to be overshadowed by the laboratory findings. It would seem to me not only in syphilitic conditions but in practically all conditions the subjective symptoms the patient feels himself should be given primary consideration.

There is another thing in connection with these fluids, that practitioners in looking for standards are apt to forget the patient's brain they can use as the standard, and it would seem to me that in dividing cases into zones or sectors, in that way we are apt to forget the patient has a mechanism of interlocking parts that cannot be so ruthlessly torn asunder.

Dr. L. M. Gaines, City, (closing)—I appreciate the discussion very much that has followed the presentation of my paper. I would simply say that the kernel of the presentation is this: I suppose that the majority of our minds function somewhat alike when confronted with a diagnostic problem. As we proceed some suspicion should enter our mind as to what are the possibilities when subjective complaints are given to us. It is important to have in mind neurosyphilis as a possibility when certain symptoms are produced such as those we have attempted to point out and are present in the patient.

Last week one of my good professional friends brought a lady to me who complained simply of numbness in the fingers. She could not feel when she had any object in her fingers. She was quite nervous; her pupils were irregular in contour and rigid to light and accommodation, and that is only one subjective symptom. Her blood was three plus. It is undoubtedly a case of neurosyphilis.

INSULIN IN THE TREATMENT OF DIABETES MELLITUS*

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Since the publication by Banting and Best (1) of their work on the isolation of the internal secretory substance of the pancreas, to which they gave the name of insulin, a great deal of interest has been aroused in this most remarkable discovery. Interest has not been confined to laboratory workers and those concerned with medical problems but it has spread to that host of diabetics who have anxiously hoped for and awaited some remedy which would, if not cure, make possible for them a more comfortable existence.

Since the work of Von Mering and Minkowski (2) Allen (3) and others it has been known that there is a definite relationship between the pancreas and carbohydrate metabolism. These observers showed that partial or complete removal of the pancreas in dogs produced

*Read before the Medical Association of Georgia, Savannah, May 2-4, 1923.

varying degrees of glycosuria which in practically all respects resembled diabetes mellitus. It was thought that removal of the pancreas deprived the organism of some substance secreted by the pancreas which was necessary for carbohydrate metabolism.

Banting and Best (4) working under the direction of Dr. J. J. R. MacLeod in the Physiological Laboratory of The University of Toronto produced in dogs an atrophy of the acinous portion of the pancreas with little or no injury of the island tissue, by ligation of the pancreatic duct. After removal of the atrophied pancreas, macerating and extracting it with Ringers Solution, it was found by these observers that injection of this substance intravenously into previously depancreatized dogs caused very definite changes to take place—(a) a rapid fall in the blood sugar and (b) a diminution or cessation of glycosuria. With this remarkable and wonderful observation in mind, the help of other investigators, J. B. Collip and E. C. Noble (4) was sought, in an effort to obtain the extract in larger quantities and in a purer form than that previously prepared. This has been accomplished in a remarkable way so that at the present time the extract is produced in a concentrated solution and practically free from foreign protein. To those of you interested in the development and purification of insulin you are referred to the articles by Banting, Best, Collip, Noble MacLeod et al (4). and the use.

The use of insulin on individuals with severe diabetes was begun by Banting, Best, Campbell and Fletcher (5) in the clinic of Dr. Duncan Graham at The Toronto General Hospital with results similar to the experimental observations previously made on dogs.

At the present time insulin is being produced in fairly large quantities and in quite pure solution by the Connaught Antitoxin Laboratories of The University of Toronto and by Messrs. Eli Lilly & Co., Indianapolis, Ind. It is with a great deal of pleasure that I acknowledge my indebtedness to the Insulin Committees of The University of Toronto and to Drs. G. H. A. Clowes and A. L. Walters of The Eli Lilly Co. for numerous favors and for supplying me with Iletin or Insulin (Lilly) for experimental purposes.

Insulin (Lilly) at the present time is supplied in 5 cc. ampoules of two strengths, the H_{10} contains ten units per cc., the H_{20} contains twenty units per cc. One unit is one-third the amount necessary to depress the blood sugar of a two kilogram fasting rabbit below 0.045 per cent in form two to five hours. Clinically one unit of insulin given subcutaneously will cause the metabolism of one to three grams of carbohydrate by the diabetic; the amount metabolized depending to a certain extent on the severity of the diabetes. In the ordinary case of diabetes one unit will cause the metabolism of two or three grams of carbohydrate.

The exact method or mode of action by which insulin brings about its result is difficult to determine; it is known that in the diabetic individual it increases the oxidation of carbohydrate and the storage of glycogen in the body; it also causes the blood sugar to be maintained at its normal level and the urine to remain sugar-free. With the complete oxidation of carbohydrate there is also an increased oxidation of protein and fat, with the rapid disappearance of acidosis, and as a result of the greatly improved metabolism a remarkable improvement in the feeling of well being on the part of the diabetic.

In determining the number of units of insulin to be administered a given diabetic the procedure which we have followed in the majority of our cases is as follows. (1) Allow one gram of protein per kilo of body weight, then calculate, according to Woodyatt's formula, the number of grams of carbohydrate and fat required to furnish the total calories and be in proportion to prevent acidosis. The patient is then given this diet for forty-eight hours; the amount of glucose metabolized is estimated for twenty-four hour periods by determining the difference between the available glucose intake of the diet, and the glucose excreted in the urine. Sufficient insulin is given to metabolize the sugar excreted in the urine by calculating that one unit of insulin will metabolize five grams of carbohydrate; the calculated dose to begin with, is given in three injections daily, one-half hour before meals. As an example, a diabetic weighing 50 K. who is taking a diet consisting of C. 60

grams, P. 50 grams, Fat 147 grams, will have an available glucose from this diet of 104 grams provided we reckon 60 percent of the protein and 10 percent of the fat as converted into carbohydrate during metabolism. If on such a diet there appears in the urine 60 grams of sugar, by subtracting 60 grams from 104 grams we obtain the amount of carbohydrate metabolized by the individual, which is 44 grams, with wastage in the urine of 60 grams. Since the 60 grams is the amount we wish to save, and supposing that one unit of insulin will metabolize five grams of carbohydrate we would give this patient twelve units of insulin divided in three doses during the day to be taken one-half hour before meals. In practically all cases this dosage will not be sufficient but it is a safe working formula for those who haven't all of the laboratory facilities for controlling its usage.

Administration

Insulin is administered either intravenously or subcutaneously. It is given intravenously only in cases of coma or where a very rapid action is desired; the subcutaneous method is the one of choice. Occasionally an individual will be found who will exhibit a slight local reaction following its use; this was common in the early days but for the past several months with the greater purification of the remedy there has been no reaction in any of our cases. Injections are given in the severe cases or the cases with very little low tolerance three times daily either about one-half hour before meals or at meal time, the size of the dose varying with the maintenance diet that the patient happens to be taking; in cases not so severe two doses daily, one administered before breakfast and the other in the mid-afternoon, will be quite sufficient to keep the patient sugar-free and with a normal blood sugar, and with the milder cases one dose daily administered in the morning is quite sufficient to accomplish the same result. It is interesting to note that with many of our severe cases it has not only been possible to reduce the number of injections daily but the dosage has also been decreased; demonstrating we believe, that the rest afforded the pancreas by the administration of insulin has helped to restore the normal activity of this gland. The adminis-

tration of insulin by mouth and by rectum has been tried with no beneficial results.

It is extremely important that everyone should realize that Insulin has not displaced, nor in the slightest degree minimized the dietetic treatment of diabetes mellitus; if anything, it has magnified the importance of dietetic control and unless this factor is fully appreciated by the patient and the profession great harm may result from the use of the drug.

The sense of well being observed in practically all of the cases after they have had Insulin is most remarkable and the strange part is that the patients experience this before they are sugar-free. At the present time, there is no explanation to offer for this phenomenon.

Dangers of Insulin

The danger following the use of insulin comes about because of the well known fact marked depression of the blood sugar, usually below .070 per cent—causes very definite symptoms of weakness, faintness, pallor, sweating, anxiety, increased pulse rate, and increased frequency of respirations, and should the sugar content of the blood be further lowered actual twitchings of the muscles, convulsions, and death may occur. Fortunately the symptoms are easily recognized by the patient and can be controlled easily by the administration by mouth of carbohydrate either in the form of orange juice, 100 cc., one or two pieces of chocolate candy, or if the reaction is severe, the intravenous administration of 50 to 100 cc. of a ten percent solution of glucose. Reactions will seldom occur when the patients are properly dieted and the dosage of insulin given is not increased too rapidly. Should a reaction occur the dosage is reduced by one-half the amount. In getting patients sugar-free by employing large dosages of insulin it is a very valuable procedure to occasionally test the urine voided hourly during the day to see at what time following the injection the urine is sugar-free and how long it remains so on the dosage given.

Since August 1922, we have and are treating thirty patients with insulin, some few of these cases will be reported as illustrative of

different phases of treatment of diabetes with this drug.

Case C-162, J. G., white, female, single, age 28 years, was first seen during October, 1919.

Complaint: Excessive thirst and hunger and weakness.

Family History: was unimportant.

Past History: was essentially negative except for dengue fever during 1918. Her average weight had been one hundred and twenty-two pounds.

Present Illness: About May, 1917, the patient started to suffer from polydipsia, polyphagia, and polyuria. Sugar was first discovered in the urine in August 1917. Her dietary treatment was not very vigorous until January 1919 and the urine had only rarely been sugar-free.

Physical Examination: The patient's weight was one hundred and nineteen pounds dressed. The examination revealed normal findings. A casual specimen of urine was free from sugar and acid bodies and the fasting blood sugar was 200 mg. per 100 cc. of blood.

Course: This patient has exhibited a moderately severe degree of diabetes, and has gotten along fairly well with dietary restrictions. It had never been possible however to maintain the blood sugar at a normal level without loss of weight.

Insulin Therapy: Was begun September 6, 1922, with a diet of carbohydrate 31 grams, protein 62 grams, and fat 110 grams and one unit of insulin three times daily at meal hours. The blood sugar reading was 328 mg. per 100 cc. with a daily output of about 5 grams of sugar in the urine. Her weight was one hundred seven and one-half pounds. The diet and insulin dosage have been gradually increased to a diet of carbohydrate 45 grams, protein 90 grams, and fat 150 grams, yielding 1890 calories per day. The insulin dosage is 7.5 units daily at ten A. M. and the patient's weight is one hundred and thirteen pounds dressed. During the past ten months the urine has rarely shown sugar. Fasting blood sugar determinations have been made at intervals of one to two weeks and on only three occasions have they been higher than normal, when the patient has been suffering from respiratory infections. This patient well

illustrates the course of the moderately severe diabetic on the undernutrition diet before the advent of insulin. She also shows the wonderful come-back after she is put on a livable diet although still restricted and, although she now takes only one dose daily she remains sugar-free, with a constant steady gain in weight.

Case C-3232. S. E., white, female, age 4 years 9 months, was admitted to the hospital November 10, 1922.

The Complaint: Was diabetes.

Family History: Was unimportant. There had been no diabetes or obesity in the family.

Past History: Was negative except for an attack of "colitis" in April 1919. She had been permitted many indiscretions of diet.

Present Illness: At eighteen months of age the patient displayed marked polyuria and enuresis, and a short time later she became comatose and remained in coma for two days. The diagnosis of diabetes was made at this time. Since then she had been in coma several times. In March 1921, she had contracted chicken pox and since that time she had had practically no tolerance for carbohydrate and had grown progressively weaker and more emaciated. During the past year the patient had received a good deal of whiskey in the diet.

Physical Examination: Revealed nothing of importance except extreme emaciation and weakness. She was unable to stand alone. Her weight was seventeen and one-half pounds and height thirty-three inches. A casual specimen of urine showed 1.2% sugar and a two plus diacetic reaction. The blood sugar was 294 mg. per 100 cc.

Course: The patient was placed on a diet of carbohydrate 10 grams, protein 20 grams, fat 40 grams. Because of her condition *Insulin Therapy* was started at once with two units, three times daily at meal time. The diet was gradually increased and on the 21st day the insulin dosage was increased to three units three times daily. On the 30th day the patient was discharged weighing eighteen and one-half pounds on a diet of carbohydrate 20, protein 35, and fat 70, yielding 850 calories or a little more than 100 calories per kilogram of body weight. Throughout her stay in the hos-

pital she had excreted about 8 grams of glucose daily in the urine, but showed no diacetic acid. On discharge her blood sugar was 174 mg. per 100 cc. On January 28, 1923, she returned to the hospital for a further period of observation of twenty-three days. She weighed twenty-three pounds. The diet was gradually increased to carbohydrate 20, protein 35, fat 85, and the insulin dosage to 10 units just after breakfast and 8 units two hours before supper. She did not become sugar-free and the average daily excretion was about 8 grams of glucose. On discharge she weighed 25 pounds. She has not always been sugar-free but the diet and insulin dosage have been maintained at the same level. She now has the appearance of a normal child and her strength and activity are quite normal. On May 2, 1923, her naked weight was 35 pounds showing a gain of 100 per cent over her weight at the beginning of treatment. This patient is an illustration of a very severe diabetes in a very young child, exhibiting marked emaciation and marked acidosis when first seen. Although she has not all of the time been sugar-free yet she has gained in weight and has absolutely changed so that she runs, romps, and plays now as any other child. We felt that since her home is in a nearby town that it would not be wise to give her sufficient insulin to keep her sugar-free because of the reaction that might occur as a result of the hypoglycemia.

Case C-817, E. McS., white, female, single, age 31 years, was first seen in March 1920.

Complaint: Was diabetes and headaches.

Family History: Was unimportant except for malaria during childhood, and frequent attacks of tonsillitis.

Present Illness: In March 1919, the patient contracted epidemic influenza and never fully regained her strength after this illness. Several months later she began to lose weight and suffer from weakness, polyphagia, and polydipsia. She developed several furuncles. Sugar was first discovered in her urine during February 1920. For five days she had taken a diet of carbohydrate 45 grams, protein 70 grams, and fat 70 grams. Her greatest weight had been one hundred and forty pounds in 1909.

Physical Examination: Revealed nothing of importance except a slight struma of thyroid and infected tonsils. A casual specimen of urine was sugar-free. A fasting blood sugar determination gave a reading of 180 mg. per 100 cc. of blood. Her weight, dressed, was one hundred-five and one-half pounds, and her height was five feet one and one-half inches.

Course: During May 1920, the patient's tonsils were removed under local anaesthesia; there was an uneventful recovery. Her tolerance increased somewhat, she gained in weight slowly, and did well for about one and a half years. In June 1922, she consulted Dr. E. P. Joslin who found that her tolerance had decreased considerably. She had lost weight to eighty-three pounds and she could not remain sugar-free on a diet of carbohydrate 16 grams, protein 23 grams, and fat 106 grams. In August 1922, she again went to Boston for treatment, weighing seventy-eight and one-half pounds. *Insulin Therapy* was begun August 22, 1922. The diet was gradually increased and the patient was discharged on September 19, 1922, on a diet of carbohydrate 32 grams, protein 39 grams, and fat 93 grams, receiving two units of insulin at eight A.M. and two units at one P. M. In spite of the insulin therapy she excreted about 18 grams of glucose in the urine daily. As a matter of convenience to the patient Dr. Joslin sent her to us for further observation. By gradually increasing the insulin dosage it was possible to increase her diet. She was discharged on a diet of carbohydrate 22 grams, protein 60 grams, and fat 125 grams and an insulin dosage of eight units three times daily with meals. She weighed ninety-three pounds, dressed, but was excreting about 40 grams of glucose per day in the urine with a one to two plus diacetic reaction. On January 7, 1923, she returned for further observation with a naked weight of eighty-seven and one-half pounds. Starting with a small diet, the diet was built up to carbohydrate 25 grams, protein 55 grams, and fat 115 grams. The patient was discharged on February 10, 1923, on this diet with an insulin dosage of twenty-five units at eight A. M. and fifteen units at four P. M. In spite of the fact that the urine is not always sugar-free she has improved in

every respect and on May 1, 1923, her naked weight was one hundred and seven pounds, an increase of over thirty-five per cent since the beginning of insulin therapy.

Other cases could be given showing the wonderful efficacy of insulin in promoting carbohydrate metabolism, causing the disappearance of acidosis, enabling those who receive it to gain in weight, remain on a livable diet and enjoy their accustomed amount of work without great fatigue, but this seems unnecessary since the above cases are examples of the severe types of diabetes.

We do not believe that all cases of diabetes should receive insulin. The great majority of mild cases, easily controlled by dietetic measures do not need insulin; they need dietetic education and regulation. For those individuals who heretofore must of necessity be on an undernutrition diet with steady loss of weight and strength it is the greatest discovery of the decade and our greatest thanks are due Banting and his co-workers for the rapid strides in perfecting its manufacture and distribution.

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DISCUSSION OF PAPER BY DR. J. E. PAULLIN

Dr. J. W. Daniel, Savannah.—I want to congratulate Dr. Paullin upon the thoroughness with which he has gone into this subject and upon the original work which he has also done. I think the doctor deserves the commendation of this Association for his excellent work.

I have had the good fortune to be permitted the use of insulin by the Toronto group. I have used

it in thirty or more cases. I have not worked along the line of Dr. Paullin—he has probably done more research work. My work has been altogether practical application. Diabetes cannot be treated as a class; every case is individual, and must be treated individually. There are different degrees of diabetes; by that I mean there are different phases of degeneration in the pancreas that do not obtain in every case.

In handling my cases I have pursued things in a different manner. I have started by going back to the methods of Allen and Joslin and their old line of work, particularly in the cases of severe type in which there was urgent reason for the immediate administration of insulin. I have tried first to find the glucose tolerance of these patients. From the chemistry and physical condition of the patient I estimate the tolerance and give a diet, checking daily the twenty-four-hour urine against the twenty-four-hour intake of glucose. Arriving at a balance, I begin to administer insulin with the same definite intake of glucose. Suppose we started a patient on 75 grams of glucose per day and he continued to overflow ten grams per day, we would then give 65 grams for a few days. If there was no overflow we would begin to use Insulin. Having determined the blood sugar threshold we increase the diet and watch the blood sugar. If three, five or ten units of insulin, given three times daily, are necessary to hold the blood sugar down or decrease it with a definite increase of glucose intake daily, this unitage should be continued until the patient can take a diet that is approximately normal, always watching the approach to the threshold point in the blood sugar.

As to whether this remedy is ever going to be available to the physicians as a whole I will not presume to say. However, I cannot see how it can be put on the market to be used indiscriminately without a thorough knowledge and application of dietetics and blood chemistry. We can never get away from diet as long as a man has diabetes. I do not see how it can be done. I have found that in some patients a unit will take care of a certain amount of glucose intake, while other cases may require more or less for each gram of glucose. I have also found that in some cases the blood sugar drops more suddenly than in others; therefore, we cannot have a fixed dosage.

We should also watch the CO₂ combining power of the plasma at regular intervals, also the creatinin, to see whether or not the patient is being underfed.

Dr. V. H. Bassett, Savannah.—I quite agree with Dr. Paullin that this is certainly the greatest medical discovery of the decade. I want to bring out the point of a possible combination of the work of the pathologist, the clinician, the dietitian and the chemist. A few years ago it would have been impossible to produce and bring to its present state of perfection a remedy of this kind because

we did not possess at the time means of estimating the sugar in the blood easily and rapidly. That method has been developed by American chemists, and it was that which made possible the utilization of the work of these investigators; also our increased knowledge of diet which has recently been of a high order in its application to diabetics.

I agree with Dr. Daniel in saying that we will never get away from the use of diet in treating diabetes. Our increased knowledge of dietetics makes possible the utilization of the discovery of these men. Over twenty-five years ago pathologists pointed the way, but conservatists were slow to follow. The fact is the theory that the secretion of the islands of Langerhans had a specific action upon sugar metabolism did not receive absolute confirmation until this work was brought before us.

In considering what Dr. Paullin has presented to us this evening, this thought occurred to me: in the first place, it seems to me most useful in the treatment of diabetics of moderate intensity during their periods of emergency. For instance, we know that persons who are diabetic may, through some emergency like an accident or an infection, reach a crisis which may, and frequently does, result in death. Immediate knowledge of the condition and the use of this agency seems to afford a remedy to carry them through the crisis, and after that crisis dietetic treatment may keep them going. It seemed at first there was a limitation to the use of the agent in severe cases of diabetes; it must be administered at least daily, and sometimes more frequently than once daily. However, we should remember we have other conditions in medicine in which the proteins, the hyperthyroids, and the hypothyroids, require the constant administration of a remedy, and even in infections, like tuberculosis, a large percentage of the tuberculous live with their disease all their lives, so that the necessity of daily administration does not entirely remove the value of this agent. It seems to me this is a triumphant result from the combined work of pathology, chemistry, dietetics, and the clinician coming last with his dietetics and development of this agency.

Dr. J. E. Paullin, Atlanta, (Closing)—The rabbits exhibited to you have each received ten units of insulin intravenously. You will notice that one of these rabbits is very definitely sick and the other is showing marked clonic convulsions. This condition is brought about purposely to show the dangers from over-dosage of insulin causing the state of hypoglycemia which, if not relieved, will result in death. The intravenous injection of 40 cc. of 20% glucose solution will stop the convulsions and restore the rabbit to practically a normal state.

In regard to dietetic regulations with diabetics, and giving insulin as previously stated, it is absolutely essential that these cases follow closely their formulae. Unless this is done great harm may result from the use of the drug. It is absolutely cruel to lead a diabetic to believe or think that he can take insulin and eat what he pleases. Such, of course, is not true.

Various workers use different methods in giving insulin; all of the work so far has been in an effort to find the best means and manner of handling these cases and during the past nine months our methods have changed considerably. However, as outlined above, this seems the best at the present time.

PRESIDENT'S ADDRESS

Eighth District Medical Society, Athens,

August 8, 1923.

W. E. McCurry, M.D.

Hartwell, Ga.

To those of us whose happy privilege it may have been to spend their academic years beneath its classic shades, it affords unalloyed pleasure to return, even for a day, to the City of Athens; to those others of us who are denied these reminiscences of the days of care-free youth, it affords, I trust, equal pleasure to view the city's magnificent thoroughfares and harmonious architecture, to feel the humming thrill of its commercial and manufacturing activity, to sense the superiority of its intellectual culture, to share for the moment in the mental, moral, and material supremacy of its citizens: the lives of all of us will have been enriched by having partaken of the spirit of its generous hospitality. Should some among us seek and find a more material and tangible form of "spirits," I know that the broad tolerance of its citizens will view the indiscretion as a reversion to the pre-Volsteadian days of youth and find pardon for such atavistic tendency.

The physicians of the Eighth District are gathered here in conference, imbued with the serious purpose to seek out the causes of disease and suffering and find methods for their prevention and relief; and it is fitting that such conference be held in that city chosen by early Georgians to house the fountain head of the State's educational system, the leader in its search for truth.

Since last it was our good fortune to meet in Athens our state and nation have passed through strenuous times. In addition to war and the financial stress accompanying the deflation of our war-expanded currency, this section has been compelled to bear an added burden due to the depredations of the arch enemy to its principal source of revenue, the boll weevil. However, with the determined

courage that has ever characterized Georgians, we have endured the agony of this trying period and are now entering the dawn of a day in which Georgia will press forward to greater heights than she has yet attained.

At the University Commencement in 1917, when we were taking our first faltering steps into the dark horror of Armageddon, Chancellor Barrow, in urging that every resource of mind, of body, of estate be devoted to the task ahead of us, said, "I shall feel humiliated if I come out of this war richer than I went in," a statement characteristic of the great heart and humble soul of the man. He understood that that time was not suited to the pursuit of private ends, but that every resource of the nation must be pooled for the common purpose, and must be instantly available. Georgia, in common with her sister states, responded nobly and short work was made of the job. Few of us, I think, can reproach ourselves with the condition which he feared for himself; for most of us, at least, are very much poorer: but out of it all we have learned anew the value of unity of purpose and endeavor; we have found an affirmative answer to the question, "Am I my brother's keeper?"; we have sensed the interrelation of our thoughts and activities; we have been convinced that by earnest co-operation—"one for all and all for one"—our dreams of a new and better world may be achieved.

These dark days have given to medicine the opportunity to prove itself. When the call came for them to leave home and all that was dear to them physicians voluntarily responded in ever increasing and sufficient numbers until the needs of not only our own armies but those of our allies were filled. When our soldiers went into the field they did so safe from those twin scourges of previous armies, typhoid and smallpox; when epidemics, such as typhus and bubonic plague brought even a more menacing threat than German bullets, means were found to combat them; when it was found that past methods could not cope with infected wounds, new and effective forms of treatment were devised; when the air was saturated by deadly poisonous gas, a way was found to breathe it with impunity; those men, a large army in themselves, who were received already

wounded in the pursuit of Venus, were returned to civil life purged of the fruits of their sins and no longer a menace to those they loved; new methods of reconstruction were found for those maimed by bullets or disease.

Of these and other achievements medicine may well be proud. By reason of the co-ordinated efforts put forth in devising and perfecting them, and the daily association in a common purpose, we learned anew the value of co-operative endeavor, so that now we work together more harmoniously than ever we did in the past. Imbued with this spirit of harmony, diagnosticians, clinicians, surgeons, laboratory men, and others have, during the past few years, been forming themselves into groups and clinics, so that their efforts might be properly combined and correlated; workers in pure scientific research have been dividing and co-ordinating their studies, so that it has become usual for any new fact or method to be published under the names of several investigators.

Intensive and correlated studies are leading us, step by step, into new and more fertile fields of usefulness. Yellow fever, malaria, typhus, plague, typhoid, the dysenteries, small pox, diphtheria are gradually being exterminated. Surgeons are learning to invade the lungs, the brain, even the heart with impunity. Internists are coming to regard man less as a mechanical creation of many intricate parts, and more as a functioning organism with definite duties to perform. Delving deeper into the study of metabolic processes, they are finding more conclusive evidence that aberrations in organic structure are dependent upon, and secondary to, disturbances of physiologic function. Pharmacologists are continually bringing forward new remedies, and finding new uses for old ones. I may cite as examples; the toxin-antitoxin immunization against diphtheria, the foreign protein studies in hay fever and asthma, the intracardiac injections of adrenalin in the moribund, thyroxin, and insulin.

Knowledge must ever precede its practical application. Had we now the facilities to put into effect methods at present known, such wide spread scourges as typhus, plague, yellow fever, malaria, small pox, diphtheria, typhoid

and others could, within the year, be wiped from the face of the earth. If we would secure the maximum benefit of the knowledge we possess, we must have the intelligent co-operation of the informed layman. This we are receiving ever more abundantly, and in following our lead it is sometimes a source of chagrin that those of them who are leading the advance occasionally tread upon the heels of the more laggard of us. As knowledge of disease and its causes becomes more widely disseminated, an enlightened public opinion is continually providing reinforcements in the battle against them, and I look to see the day, in the not distant future, when those mentioned and many other diseases will be known only in history.

The rapidity with which additions are being made to the sum of knowledge results at times in judgment being warped by enthusiasm. Conclusions are accepted without examining the premises and reasoning upon which they are based through the clarifying lens of critical analysis. Untested hypotheses and illogical theories are heralded in the public and even in the medical prints, resulting in confusion and disorder which can only be avoided by subjecting them to the cold calm light of pure science. For those who "listen with credulity to the whispers of fancy and pursue with eagerness the phantoms of hope," there are the electronic reactions of Abrams, the inane shibboleth of the pharmacist of Nancy, polyvalent vaccines and sera, pluriglandular therapy, the manhandling of osteopathy, the tail twisting of chiropraxy.

We grow unduly excited, I think, at times over the fact that such camp followers of medicine as the faddists, the cultists, and the voodooists are forever attempting to tread upon the preserves of science. Fakirs and charlatans have always existed, probably will always do so. It is, I think, an unwitting tribute to the profession that the culpable ignorant, the dishonest unfit should be constantly attempting to enter medicine by the back door.

Considerable apprehension is being manifested throughout the country over the growing scarcity of physicians in the rural dis-

tricts. It is true that some small communities have been deprived of the services of local physicians which they had long enjoyed; but in this agitation insufficient consideration is given to modern means of communication and transportation. With the telephone and automobile a patient twenty miles away is nearer to his doctor in time than one five miles away was before these facilities came into general use. It is no more than an adjustment to new conditions.

In the plan of organization of the medical profession adopted a generation ago the importance of the district society as an integral factor was given little consideration. True, the states were authorized to establish councillor district societies and the by-laws of the Medical Association of Georgia makes it the duty of the Councillor to foster them; and we now have societies in every district in Georgia save one; but they are orphan children and have no duties, no responsibilities, no powers in the state association. The only point of official contact is that the Medical Association of Georgia, at the end of its session when only a handful of members are present, elects a Councillor. This is usually done, in violation of the constitution upon nomination by caucus of those present from the district. In many years participation in these elections I have not seen more than a half dozen present at any such caucus; quite frequently there are one or two or none. Few of those who vote in the actual election have any knowledge of, or direct interest in, the qualifications of the man for whom they are voting or the needs of the district. I have seen it happen more than once that the man so elected took no interest in the work, failed to attend any meetings, and had to be removed from office by the President of the Association.

The Councillor is the representative of the district in the Medical Association of Georgia. If his election, in accordance with customary democratic usage, were put into the hands of the district society, its members would give sufficient time to the choice, would have more intimate acquaintance with the qualifications of its personnel, and would be able in many instances to select one more suitable to its needs. Furthermore, with a definite and re-

sponsible status in the scheme of organization, its importance would be enhanced and the interest in it of the profession in the district would be increased. I would recommend the earnest consideration of this situation, and, if such a change is deemed wise, that a suitable resolution be passed by this society urging each county society in the district to instruct its representative to support the changes in the Constitution of the Medical Association of Georgia necessary to put it into effect.

In conclusion I desire to thank the society for the honor conferred upon me in naming me its leader, and to express my appreciation of the hearty co-operation I have received from our efficient secretary and the individual members.

ATYPICAL FACIAL NEURALGIA RELIEVED BY THE INTRODUCTION OF A SOLUTION INTO THE EXTERNAL AUDITORY CANAL: PRELIMINARY REPORT.

J. D. Thompson, M.D.,
Atlanta, Ga.

By atypical facial neuralgia is meant that type of distressing pain located unilaterally in the face or head not necessarily of a paroxysmal nature and not confined to the area supplied by the trigeminal or occipital nerves.

On account of the marked benefit obtained in approximately seventy cases of this form of neuralgia, the method of treatment as outlined below is given in the form of a preliminary report, with the idea of submitting in a subsequent communication a detailed report of cases in addition to the results of certain experimental investigations.

Treatment

The treatment consists of the introduction, into the external auditory canal ipso lateral to the side of the neuralgia, of a solution of cantharides and magnesium sulphate in glycerine. The canal is filled with the solution which should be retained for twenty to thirty minutes. The treatment should be repeated two or more times daily until relief from the neuralgic pains is experienced. It is then discontinued, until the pain returns. Before using the treatment, the patient should be subjected to a thorough examination so as to rule out a demonstrable lesion which is causing the

pain. The treatment is not a panacea and is not recommended except in those cases to which the above definition applies.

Preparation of Solution

Four drachms of filtered 35% solution of tincture of cantharides and one ounce of magnesium sulphate (C. P.) are added to two ounces of glycerine. It will require five or six days for the magnesium sulphate to be thoroughly incorporated in the solution. Each day, in order to aid in this process, the mixture should be shaken several times. When the magnesium sulphate has become thoroughly dissolved the solution is ready for use.

Results

In the properly selected cases there has been definite improvement in all, and absolute relief of the distressing pain in many. In order to rule out a psychological influence no suggestion that the patient will be benefited is made. Frequently some other reason is given for introducing the solution into the external auditory canal, and a voluntary expression regarding the improvement of the pain is awaited. The most brilliant results have been obtained in those cases complaining of pain in the temple, malar region, and the area posterior to the mastoid process. The continued use of the solution is not attended nor followed by unpleasant symptoms. A point of great interest is that no local anesthesia of the external auditory canal or membrana tympanum is produced. The solution has likewise given gratifying results in the relief of pain in acute otitis media and furunculosis of the external auditory canal. In treating this latter condition the solution is applied by means of a tampon.

Comment

A treatment which has yielded surprisingly good results in the relief of atypical facial neuralgia is herewith suggested. An explanation in regard to the *modus operandi* is not attempted. Other solutions introduced in a similar manner may give equally as good results. This brief report is made not only with the hope that others may give the method a thorough trial, but also that some may be stimulated to explain by experimental results the real reason why the pain in such cases is so favorably influenced.

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

PLAN STATE HEALTH CONFERENCE AT SAVANNAH, OCTOBER 26

Trade Body Approves—100 Delegates From All Over State Expected

Under the auspices of the Savannah Board of Trade a State conference on matters of public health will be called for October 26th in the city, it was decided yesterday after the directors of the organization had unanimously approved the summoning of such a gathering and agreed to incidental expense thereto. Dr. John W. Daniel, president of the State Medical Society and member of the State Board of Health, appeared before the directors and briefly explained the necessity of holding the conference.

As told in the Morning News recently, the movement which Dr. Daniel is fostering with the co-operation of the public health committee of the Board of Trade, the local medical society and prominent men all over the State, seeks a larger State appropriation for the advancement of public health, there being only \$90,000 in the past year's budget for that purpose. The elimination of con-

tagious diseases by drainage and other specific methods is the aim of this movement, and it is felt that with sufficient money available this purpose can be accomplished in a few years, thus stimulating industrial expansion and agricultural progress throughout Georgia.

Approximately a hundred delegates are expected at the health conference next month from various counties throughout the State. Many leading physicians and public health officers will be included in the gathering, and plans will be discussed and formulated to carry on a campaign that will result, it is hoped, in a state-wide demand for adequate funds with which to bring Georgia forward to her rightful place in matters of public health and, of course, progress in industry and agriculture.

A meeting of the committee to lay plans for the conference will be held shortly.

COMMUNICATION FROM PRESIDENT DANIEL

Savannah, Ga., Sept. 11th, 1923.

To the Editor:

You will see from the enclosed clipping from the Savannah Morning News that the better health program of the Medical Association of Georgia is on a going basis. Having talked the matter over with the leading business men of Georgia, and in every instance received their hearty approval of the plan, I finally took the matter before the Savannah Board of Trade, with the result that the meeting has been called for October 26th, and promises to be a very successful affair.

The plan is that we are to try to put Georgia where she rightfully should be—at the head of the Southern States. Her loss of prestige in the commercial world is not entirely due to the loss in cotton production, but is due above all else to the prevalence of preventable diseases. Other states have been doing systematic work along the line of controlling preventable diseases for some years, and the result has been that as the percentage of inefficiency due to preventable diseases has decreased, their industries have increased in direct ratio. So the Medi-

cal Association of Georgia will undertake to lead the way, and with the aid of our men of affairs we should soon be in the front again.

I wish you would communicate with the House of Delegates and the Council and have the chairman of each body call for a meeting in Savannah on October 26th, in order that the Medical Association, through its governing bodies, may be active in this work. Let each member plan and be ready to set forth a concrete proposition for better health conditions. Also kindly publish in the Journal that all medical men are invited to take part and will be welcome, for this is a matter that is of vital importance to our State and to each individual community.

(1) The plan at present is to have the County Commissioners of Georgia, the mayors and other public officials, meet with us. We will first take up the Ellis Health Law or something better, and try to have it adopted throughout Georgia.

(2) We will endeavor by an intensive campaign of publicity and through the influence of each County Medical Society to educate the masses to the need of a larger appropriation for public health work. Then have this influence brought to bear on the next Legislature and get the appropriation desired.

(3) Get the co-operation of all the big industries of Georgia and have them put into operation in their vicinity and along the line of their properties, modern, sanitary and preventive measures.

(4) Consider other means of accomplishing the desired results.

We hope to have the Governor, President of the Senate, Speaker of the House, and other State officials present. We will do something for Georgia that is worth while. I will send you literature on the subject from time to time. Please attend to this at once and let me know what response we get. Will be glad to have suggestions from members of the State Association. Have them write to me direct. This is not a one man's project, but a State Association idea, and

we must succeed. With kindest regards, I am,

Your friend,
JOHN W. DANIEL, President.

Resolution Passed by the Eighth District Medical Association

Note resolution of Eighth District Medical Association printed below. Please read and discuss same with your County Society at some future meeting, and if this plan meets your approval, instruct your delegate to the State Association next year accordingly:

"Resolved, That the Eighth District Medical Association petition the Medical Association of Georgia for such amendments of its Constitution and By-Laws as will permit the election of District Councilors by the District Associations.

"Resolved, further, That a copy of this resolution be transmitted to each County Society with recommendation that its representatives to the State Association be instructed to support such amendments."

D. M. CARTER, Secretary.

Madison, Ga., Aug. 25, 1923.

TRI-STATE DISTRICT MEDICAL ASSOCIATION

To the Editor:

The physicians of the Middle West would deeply appreciate the favor if you will kindly publish in the Georgia Medical Association Journal the announcement of the coming Annual Assembly of this Association which is to be held at Des Moines, Iowa, October 29th, 30th, 31st and November 1st.

Will you kindly state that the physicians of your state, (who are in good standing in their state's society) are most cordially invited to attend and take part in the program.

This association is a purely post-graduate organization. The entire time of the annual assembly is taken up with scientific study. We are enclosing you a partial list of eminent members of the profession who have kindly accepted to take part on the program. We would appreciate as much publicity as possible in your journal.

Again assuring you of our deep appreciation.

Very sincerely yours,

Freeport, Illinois.

W. B. PECK.

PROGRAM COMMITTEE.

Dr. Walter L. Bierring, Des Moines, Iowa.
 Dr. E. Starr Judd, Rochester, Minn.
 Dr. Dean Lewis, Chicago, Illinois.
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 Dr. John L. Yates, Milwaukee, Wisconsin.
 Headquarters—Fort Des Moines Hotel.

THE AMERICAN CONGRESS ON INTERNAL MEDICINE

To the Editor:

Since its re-organization, The American Congress on Internal Medicine has held seven clinical sessions, each one of which has been marked by distinct progress in useful service to the American Medical Profession.

Once a year, the Congress calls her members to one of the great medical centers of the country to witness the advances in Internal Medicine as presented by prominent and experienced men during a week of practical clinics. Which of us ever visited the workshop of another intelligent observer without returning home a better doctor? But it is not only the actual knowledge absorbed in the clinics at these sessions; what probably counts for even more than this, is the inspiration for further study and investigation which one experiences. Should the need for further efforts be realized, it may result in members seeking a systematic course in one of our good post-graduate schools.

This is what The American Congress on Internal Medicine aims to do for those near, as well as those who are, geographically, removed from medical centres.

Another great aim of the Congress is that through the stimulation of interest resulting from the Annual Clinical Week, Internal Medicine is placed on the high plane to which it is so justly entitled, especially among the laity. Through such educational propaganda, the public may be made to realize that our department of the healing art, which, through its valuable diagnostic aids makes possible the safe performance of so many surgical procedures, should be entitled to at least equal recognition with the sister art of surgery.

Such, then, are a few of the advantages which we enjoy as members of The American Congress on Internal Medicine. Should it not be our duty to extend such opportunities to our less fortunate brother whom we consider worthy of profiting through these advantages, by informing him of what our Congress is doing, and urging him to apply for membership? Congress application blanks are always obtainable from the Secretary.

This year, our Clinical Session is to be held in St. Louis, geographically, the most centrally situated of the large cities in this vast country. It has medical schools, (The Washington University Medical School and the St. Louis University) which are considered among the most efficient in the United States. These schools have large staffs of well known and capable teachers and have at their command extensive clinical facilities. St. Louis possesses also an organization known as the "St. Louis Clinics." This clinical organization has been in operation for four years and is an agency through which an average of 12,000 clinics is scheduled annually. All these are systematically organized, and will be instantly available for our session.

We, therefore, extend to you and your interested friends a cordial invitation to attend the next session of The American Congress on Internal Medicine in St. Louis. We assure you that we shall leave no stone unturned to make your visit both pleasant, interesting and scientifically profitable.

Fraternally yours,

ELSWORTH S. SMITH, M.D.

MEETING OF THE GEORGIA STATE COUNCIL OF HEALTH AND PUBLIC HEALTH EDUCATION.

The second annual meeting of this body was held in Macon, Ga., July 7, 1923. The following official representatives were present: Dr. Theodore Toepel, Medical Association of Georgia, Mr. J. C. Logan, American Red Cross, Miss Mary Dickinson, Georgia Anti-Tuberculosis Association, Dr. C. E. Waller, State Board of Health, Miss Susan K. Matthews, State College of Agriculture, Miss Caro Lane, Georgia Physical Education Association, Dr. A. R. Rozar, Civitans, Dr. Thos. D. Walker, Georgia Pediatric Society, and Mr. F. E. Lane, State Board for Vocational Education. The following were present as guests, with the privilege to participate in the discussions: Dr. J. W. Daniel, President, Medical Association of Georgia, Mr. Burr Blackburn, Secretary, State Council of Social Agencies, Dr. N. L. Spengler, Donalsonville, Dr. M. A. Clark, Macon, and Dr. C. H. Richardson, Macon.

It was very evident, as the discussion on co-ordination of State health activities progressed, that each State association has in the past worked independently of the others and, as Dr. Daniel brought out so emphatically in his remarks, that the time has arrived to avoid duplication and overlapping by the different agencies in the promotion of health work in the state, that the necessity for centralizing effort and reducing expence was imperative. These remarks were supplimented by Dr. M. A. Clark in his characteristic, impressive way. He pointed out the necessity on the part of the lay associations to secure the co-operation of the medical profession in any program of local health work, and with special reference to nutrition work, stated that this was essentially a medical problem and a knowledge of the practice of medicine was necessary to the successful application of the principles of nutrition.

A special committee was appointed to meet during the interval and report to the next annual meeting, presenting a tentative plan of co-ordinating the health activities of the various state bodies and bringing about a spirit of co-operation.

The trend of the discussions at this meeting emphasized again the fact, that the medical profession shall assume the initiative in all local and state health matters, thereby safeguarding our traditional rights to remain the leaders in every movement, which pertains to the improvement of the health of a community and the state.

THEODORE TOEPEL, Chairman,
Committee on Health and Public Instruction.

MEETING OF THE EIGHTH DISTRICT ASSOCIATION

The Eighth District Medical Association held its annual meeting at Athens, August the 8th, under the presidency of Dr. W. E. McCurry, of Hartwell. The meeting was well attended, and the Clarke County Society, entertaining their guests at the East Lake Country Club with an old-fashioned Georgia barbecue, made it one of the most enjoyable meetings ever held by the organization.

Among the visiting physicians from other Districts were: Drs. Burns and Garrison, Clarksville; Boland, Cornelia; Kelley, Lawrenceville; Burns, Bryan, Mauldin, Rudolph, Meeks and Rogers, Gainesville. Drs. M. C. Pruitt and C. W. Roberts, Atlanta.

A resolution was unanimously adopted inviting the locating in Athens of a station of The National Child Welfare Association.

A movement was agitated by Dr. W. E. McCurry, of Hartwell, looking to the election of District Councilors by the District Associations.

An interesting programme was rendered by the members of the Association.

The 1924 meeting will be held at Washington, Ga. D. M. Carter, M. D., Sec.

MARRIAGES

A marriage of interest was that of Dr. Edward Wills Watkins, Jr., and Miss Bessie Smith, on Thursday, August 9th. Dr. and Mrs. Watkins will make their home at Ellijay, Ga.

Of interest to many friends throughout the State is the announcement of the marriage of Dr. A. H. Black, of Thomaston, Ga., and Mrs. Obie Duncan, of Montezuma, Ga. Dr. and Mrs. Black will reside in Thomaston.

NEWS ITEMS

Mr. Robert Maddox, one of the best known business men of the south, has been named president of the Georgia State Board of Health, succeeding Dr. W. H. Doughtly, Jr. The State Board of Health is composed of one member from each congressional district and is financed by State appropriations.

The U. S. Government trachoma hospital at Pelham, Ga., closed July 20th, after rendering about two months' free treatment to the people of that section. More than a hundred cases of trachoma were treated during this time and the hospital has been a very great benefit.

Dr. Dunbar Roy, prominent Atlanta physician, has given a \$1,000 subscription to the "Founders' Roll" of the Stone Mountain Confederate Memorial in honor of his father, the late Dr. Gustavus Garnett Roy.

A \$1,000 memorial gift in honor of Dr. E. L. Connally was made by Dr. Connally's family to the "Founders' Roll" of the Stone Mountain Confederate Monumental Association.

The First District Medical Society held its mid-summer meeting in Savannah, August 23rd and 24th.

The following appointments were made by Governor Walker:

Dr. J. F. Lunsford, of Preston, Dr. E. S. Osborne, of Savannah, and Dr. Henry W. Shaw, of Augusta, as new members of the Board of Trustees of the State Medical College of Augusta.

Dr. J. C. Jarnagan, of Warrenton, re-appointed as a member of the Board of Trustees of the Georgia State Sanitarium.

Dr. Linton Gerdine was unanimously elected president of the Athens Board of Health by the Athens City Council, succeeding Dr. J. C. McKinney.

Dr. W. H. Cabaniss, of Athens, is the newly elected head of the Medical Association of the 8th Congressional District. Dr. Cabaniss succeeds Dr. W. E. McCurry, of Hartwell. Dr. W. C. McGeary, of Madison, was elected Vice President, Dr. D. M. Carter, of Madison, Secretary and Treasurer, and Dr. H. M. Fullilove, of Athens, Councillor.

Dr. E. K. Maclean, Thomasville, Ga., motored to Saluda, N. C., and spent three weeks in the Saluda Childrens Hospital, studying various methods of treatment in vogue there, which are especially adapted to meet the needs of the southern climatic conditions.

Dr. D. R. Longino announces the opening of offices at 310-311 Atlanta National Bank Bldg., Atlanta. Practice limited to diseases of eye, ear, nose and throat.

Dr. William L. McDougall has opened offices at 1202 Atlanta National Bank Bldg. Practice limited to treatment of diseases of ear, nose, and throat.

Dr. C. G. McCay announces the removal of his office from 901-2 Atlanta National Bank Bldg., Atlanta, to 308-9 Atlanta National Bank Bldg.

Dr. William Randolph Smith announces the opening of his office at 746 Peachtree St., Atlanta, Practice limited to surgery.

The Southern Pediatric Seminar held its third session from August 6th to August 20th at Saluda, N. C. This Seminar is a post-graduate course in methods of diagnosis, prevention and treatment of diseases of children.

The Macon Graduate Clinic will be held in Macon from Nov 5th to the 10th. Dr. C. H. Richardson, as Chairman, will be assisted by Dr. A. R. Rozar, Dr. J. C. Anderson and Dr. G. Y. Massenburg to draw plans by which the Post Graduate Clinic will run.

The LaGrange Medical Society held its largest and most successful meeting July 26th, at LaGrange. The counties being entertained were: Chambers, Randolph, Meriweather, Harris, Heard, Coweta, and Troup. The following officers were elected: President, Dr. Emory R. Park; Vice President, Dr. R. S. O'Neal; Sec'y-Treas., Dr. Emery C. Herman.

The Board of Trustees of the University of Georgia, which held a meeting at Athens, July 24th, was presented with a large size portrait of Dr. E. F. Starr, of White County, a graduate of Georgia many years ago, by Dr. L. G. Hardman. Dr. Starr was the first surgeon in the world to perform a suprapubic operation removing a stone from the bladder of a man. The stone was very near the size of an ordinary hen's egg and had been preserved by Dr. Starr's daughter and was presented along with the portrait to the University.

Dr. James B. Wright, of Augusta, who has been practicing medicine at Black Mountain for the past year, has been appointed health officer of the town by the Board of Aldermen. Dr. Wright is planning to have a community nurse to aid him in his work. He is also fitting out a community rest room in his residence.

There is little danger of race suicide in Georgia. The white people showed up better than the colored people in the matter of births last year. There were 69,615 babies born in Georgia during the year 1922. Women of Georgia between the ages of 14 and 45 years are giving birth to children at the rate of 193 per day. The bulletin further states that one white woman out of every eight of child-bearing age in Georgia gives birth to a child every year.

Physician Wanted

To the Editor:

I have been requested by some citizens of Mendes, Ga., to try to get some physician to locate there, and I suggested to them that they advertise in your paper.

If you can assist them in this way, please advise me, and also advise what a short advertisement in your paper would cost.

Yours very truly,

OBITUARY

Dr. J. W. Puckett died at his home on Howell Mill Road August 2, 1923. Dr. Puckett was 48 years old. His death was a great shock to his host of friends.

Dr. James R. Dent, 48 years old, prominent physician of Wrightsville, Ga., died at his home, July 18, 1923, of typhoid fever.

Dr. O. B. Tucker, well known physician, died at his home, 1317 Fifth St., Atlanta, July 19, 1923, after an illness of several months.

Dr. Edward C. Bruce, 46 years of age, a resident of Brunswick, Ga., died July 22, 1923, after an illness of several months.

NEW AND NONOFFICIAL REMEDIES.

Sofos.—A mixture of sodium dihydrogen phosphate and sodium hydrogen carbonate (sodium bicarbonate), rendered stable by coating the particles of one of the constituents with disodium hydrogen phosphate. One part of sofes has the same phosphate value as 1.75 parts of sodium phosphate U. S. P. When sofes is treated with water, sodium phosphate (Na_2HPO_4) is formed and carbon dioxide is set free. Sofes has the physiologic action of sodium phosphate. It differs from the effervescent sodium phosphate preparations in that it is free from citrate or tartrate. General Chemical Co., New York.

Pollen Extracts—P. D. & Co.—Liquids obtained by extracting the proteins from the dried pollen of various species of plants. The products are standardized in "units," a unit being the extractive obtained from 0.002 Mg.

of pollen. For a discussion of the actions and uses of pollen preparations, see Pollen and Epidermal Extract Preparations and Biologically Reactive Food Proteins, *New and Nonofficial Remedies*, 1923, p. 234. These preparations are marketed in packages for diagnostic use and in packages intended both for diagnostic use and for treatment. The following preparations are marketed: Pollen Extract Ragweed-P. D. & Co. and Pollen Extract Timothy-P. D. & Co. Parke, Davis & Co., Detroit. (*Jour. A. M. A.*, July 7, 1923, p. 27).

Sulpharsphenamine-Billon.—A brand of sulpharsphenamine—N. N. R. (see *Jour. A. M. A.*, March 31, 1923, p. 919). It is marketed in ampules containing, respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm. and 0.6 Gm. Powers-Weightman-Rosengarten Co., Philadelphia.

Radium Emanation (Radium Emanation Corporation).—The emanation, mechanically removed from a solution of a radium salt, in admixture with inert gases. It is supplied in sealed glass capillary tubes; each tube accompanied by a statement of the amount of radium emanation in terms of millicurie contained in it at the time of sale. The radiation from radium emanation as a therapeutic agent is analogous in all respects to that from radium and its salts, except that the activity decreases rapidly (see *Radium and Radium Salts*, *New and Nonofficial Remedies*, 1923, 255). The intensity of radium emanation decreases rapidly through decay (at the rate of about three-fourths per cent. per hour). Radium Emanation Corporation, New York. (*Jour. A. M. A.*, July 21, 1923, p. 213).

Pollen Protein Allergens-Squibb.—In addition to the products described in *New and Nonofficial Remedies*, 1923, p. 241, the following have been accepted: Ash Pollen Allergen-Squibb; Hickory Pollen Allergen-Squibb; Hickory Pollen Allergen-Squibb; Honeysuckle Pollen Allergen-Squibb; Maple Pollen Allergen-Squibb; Oak Pollen Allergen-Squibb; Pine Pollen Allergen-Squibb; Poplar Pollen Allergen-Squibb. E. R. Squibb & Sons, New York.

Animal Epidermal Extracts Allergens-Squibb. In addition to the products describ-

ed in *New and Nonofficial Remedies*, 1923, p. 241, the following have been accepted: Beaver Fur Allergen-Squibb; Chamois Skin Allergen-Squibb; Civet Cat Fur Allergen-Squibb; Fox Fur Allergen-Squibb; Kolinsky Fur Allergen-Squibb; Leopard Fur Allergen-Squibb; Mink Fur Allergen-Squibb; Muskrat Fur Allergen-Squibb; Mole Fur Allergen-Squibb; Opossum Fur Allergen-Squibb; Persian Cat (Angora) Fur Allergen-Squibb; Pony Fur Allergen-Squibb; Raccoon Fur Allergen-Squibb; Seal (Alaskan) Fur Allergen-Squibb; Seal (Hudson) Fur Allergen-Squibb; Sheep's Wool Allergen-Squibb; Skunk Fur Allergen-Squibb; Squirrel Fur Allergen-Squibb.

Food Allergens-Squibb.—In addition to the products described in *New and Nonofficial Remedies*, 1923, p. 242, the following have been accepted: Apricot Allergen-Squibb; Butterfish Allergen-Squibb; Cocoa Allergen-Squibb; Coconut Allergen-Squibb; Cottonseed Allergen-Squibb; Duck Allergen-Squibb; Fig Allergen-Squibb; Flaxseed Allergen-Squibb; Ginger Allergen-Squibb; Goat Allergen-Squibb; Guinea-Hen Allergen-Squibb; Hay (Alfalfa) Allergen-Squibb; Huckleberry Allergen-Squibb; Lemon Allergen-Squibb; Olive (ripe) Allergen-Squibb; Paprika Allergen-Squibb; Pineapple Allergen-Squibb; Pheasant Allergen-Squibb; Pumpkin Allergen-Squibb; Rabbit Allergen-Squibb; Scallop Allergen-Squibb; Sea-bass Allergen-Squibb; Smelt Allergen-Squibb; Sole Allergen-Squibb; Tea Allergen-Squibb; Tobacco Allergen-Squibb; Vanilla Allergen-Squibb; Whiting Allergen-Squibb; Yeast Allergen-Squibb.

Pollen Extracts-Arleo. In addition to the products described in *New and Nonofficial Remedies*, 1923, p. 237, the following have been accepted: Arizona Ash Pollen Extract-Arleo; Arizona Cottonwood Pollen Extract-Arleo; Arizona Walnut Pollen Extract-Arleo; Bermuda Grass Pollen Extract-Arleo; Burr Ragweed Pollen Extract-Arleo; Burroweed Pollen Extract-Arleo; California Mugwort Pollen Extract-Arleo; Carlessweed Pollen Extract-Arleo; Carpet Sage Pollen Extract-Arleo; Greasewood Pollen Extract-Arleo; Hill Sage Pollen Extract-Arleo; Johnson

Grass Pollen Extract-Arleo; Mexican Tea Pollen Extract-Arleo; Mountain Cedar Pollen Extract-Arleo; Orach Pollen Extract-Arleo; Pigweed Pollen Extract-Arleo; Prairie Ragweed Pollen Extract-Arleo; Russian Thistle Pollen Extract-Arleo; Sage Brush Pollen Extract-Arleo; Sea Blite Pollen Extract-Arleo; Shad Scale Pollen Extract-Arleo; Western Ragweed Pollen Extract-Arleo; Wild Sunflower Pollen Extract-Arleo.

Pollen Extracts-Arleo are marketed in sets of five vials representing graduated concentrations; also in concentrated solution in capillary tubes for diagnostic test. Arlington Chemical Co., New York. (*Jour. A. M. A.*, July 28, 1923, p. 299).

Propaganda For Reform.

Toxicity of Carbon Tetrachlorid.—Experiments on dogs demonstrated that large doses of carbon tetrachlorid produced degenerative changes in the liver and kidney of these animals. In view of these findings and the experience of Lambert, it would appear advisable that the dose of carbon tetrachlorid be reduced in routine treatments. (*Jour. A. M. A.*, July 7, 1923, p. 47).

The Dreyer Tuberculosis Vaccine.—Newspapers have carried extended notices of the Dreyer so-called "defatted" tuberculosis vaccine. The experiments of Professor Dreyer of the Department of Pathology of Oxford University depend on the production of an antigen preparation from tubercle bacilli which are previously deprived of their waxy envelop by treatment with a formaldehyd solution. Animal experiments and some clinical trials have been reported which give ground for the hope that the new antigen may prove of value. Professor Dreyer's work does not offer sufficient evidence to warrant the conclusion as yet that any marked improvement has been made in the treatment of tuberculosis. (*Jour. A. M. A.*, July 14, 1923, p. 138).

Another Electronic Diagnosis and Treatment. A report on the case of Mr. D. who was treated for carcinoma by C. E. Phelps, M. D., an Abrams disciple of Hartley, Iowa, is of interest because it represents, undoubtedly, what is duplicated in hundreds, if not thousands, of cases, in various parts of the country.

The clinical report is by Dr. E. E. Munger, of Spencer, Iowa, and the pathological report was made by Dr. E. R. LeCount of Chicago. Briefly, it is the story of a man in his seventies suffering from inoperable carcinoma of the stomach with implanted metastasis on various other abdominal organs. Dr. Munger diagnosed the condition when the patient first came to him. The diagnosis was verified at the Mayo Clinic. Then the man began taking the "Abrams Treatment." He was led to believe that he was being rapidly cured and was finally told that "everything had cleared up except a trace of colisepsis." A month later he died. (*Jour. A. M. A.*, July 28, 1923, p. 317).

Ethyl Chlorid as a General Anesthetic. The published mortality rate from ethyl chlorid anesthesia varies from 1 in 15,000, which is also the mortality rate of ether anesthesia, to about 1 in 6,000. From these statistics, therefore, one might judge that ethyl chlorid stands between ether and chloroform; but it is probably close to the latter, which gives a mortality of about 1 in 3,500. Ethyl chlorid, however, is used for minor anesthesia, and it is unfair to compare it with the major anesthetics for prolonged operations. The fair comparison for ethyl chlorid is with nitrous oxid, the accepted mortality rate from which is about 1 death in 1,000,000 anesthetics. Hence, whether for induction of anesthesia or for minor anesthesia, ethyl chlorid is somewhere between 200 and 66 times more dangerous than nitrous oxid. It is, on the other hand, somewhat safer than chloroform. The essential danger from ethyl chlorid lies in the suddenness of the death which may occur within half a minute from the beginning of the inhalation. The danger signs are such as may be overlooked by any but the most experienced anesthetist. (*Jour. A. M. A.*, July 28, 1923, p. 320).

BOOK REVIEW

Outlines of Psychiatry—William A. White, M.D., Ninth Edition, 1923. Nervous and Mental Disease Publishing Company, 3617 Tenth St., N. W., Washington, D. C.

In part one of this hand book the author discusses descriptive and genetic psychology

and the nature, classification, cause, treatment and general symptomatology of mental disease.

In part two there is a detailed discussion of the different types of the mental diseases.

Part three includes methods of examination, the Binet-Simon Intelligence Scale, etc.

There appears three noticeable features in this edition; emphasis on the treatment of paresis, pathology of dementia praecox, and an attempt to break up presenile, senile and arteriosclerotic psychoses into more definite clinical pictures.

The Medical Staff of the Georgia State Sanitarium recommend this hand book to the Members of the Georgia Medical Association.

Buy a copy, and after you have bought it—
READ IT.

GEORGE L. ECHOLS.

BOOK REVIEW

Physiology, Hygiene, Sanitation and Health

A two-book series of texts for use in teaching health in the upper and lower grammar grades of our schools.

Book One.—Hygiene and Health, 209 pages. For the fourth and fifth grades.

Book Two.—Physiology and Hygiene, 353 pages. For the sixth and seventh grades.

By Dr. Charles P. Emerson, Dean of the Medical College of the University of Indiana, and formerly professor in Johns Hopkins Medical College; and George Herbert Betts, Ph.D., professor of Education in North Western University. Bobbs-Merrill Co., Publishers, Indianapolis, 1923.

* * *

These are the most interesting and attractive text-books that have been brought to our attention in a long time. Mechanically, the books are all that could be desired. They are the last word in paper, topography, binding, and illustrations. The style is simple, direct, and fascinating. The books read like a novel, gripping the interest of the pupil and holding his attention clear to the end.

The name of Dr. George Herbert Betts on the title page is an assurance to teachers that the books are pedagogically sound. Dr. Betts has written a half dozen standard

works on education, books that should be in the professional library of every teacher in Georgia. His reputation is international, and he is a recognized authority on all matters of pedagogy. His reputation will not suffer from the work he has done in these books. For proof of this statement, see the motivated instruction at the end of each chapter. "Interesting Things to Do"; "Questions to Answer"; "Facts to Remember"; "Health Problems"; "Problems to Investigate"; "Problems and Experiments"; these are found at the end of each chapter. They correlate the classroom instruction with the work in health education being done by the State, County and City Boards of Health, the International Bureau of Health, the American Medical Association, the Anti-Tuberculosis League, the Red Cross, and other agencies co-operating with the schools in the work of health education. They carry the lessons learned in the classroom into the daily life of the pupil and, best of all, they go into the homes and educate the parents.

The name of Dr. Charles P. Emerson on the title page is a guarantee of the scientific accuracy of every physiological fact set forth in the books, and this is a matter of serious import in view of the fact that the market is flooded with text-books on physiology written by laymen and full of pseudo-scientific misinformation.

It would be a blessing to the children of Georgia if these books could be substituted for the two books now in use in the public schools of Georgia, one of which is out of date, and the other full of inaccuracies.

These books by Emerson and Betts are written after our entrance into the World War and as a result of the disclosures made when the selective draft law was put into operation and so many of our men were found physically unfit, and unfit as the result of preventable causes. Here was proof that the type of instruction heretofore given in our schools, such as how the gastric juice operates and how many bones there are in the human body, failed to make healthy men and women of the boys and girls. Immediately, Health Education took on a new defi-

dition, a new purpose, a new plan, and a new method, all of which are worked out most admirably in these books by Emerson and Betts.

Percival's Code: A Chapter in the Historical Development of Medical Ethics

Percival's code was published in 1803. From the period of Percival's code to the present, Chauncey D. Leake, Madison, Wis. (Journal A. M. A., Aug. 4, 1923), says that most laws relating to medical practice have been instigated by responsible physicians, and all standards of professional morality have been based on his work. Leake examines briefly the character of Thomas Percival, M.D., and his most important contribution. In 1771 he outlined a system for the "Internal Regulation of Hospitals." As the preface to the first edition of the "Medical Ethics" indicates, he composed in 1792, at the request of the physicians of the infirmary, "A Scheme of Professional Conduct Relative to Hospitals and Other Medical Charities." This became the code of laws under which the infirmary operated. In 1794, this code was printed for private circulation, in order to gather the criticisms of friends. Percival wished to call his work "Medical Jurisprudence," but was persuaded that "Medical Ethics" was a more suitable title. With the corrections made by friendly criticism, and with the endorsement of a long list of prominent English physicians, among whom was Erasmus Darwin, the work was published at Manchester in 1803. Percival's "Medical Ethics" is a charmingly written book, expressed quite in that leisurely, quaint and scholarly style one associates with a true English gentleman of the old school. Meeting at once with marked success, its wide distribution among all practitioners and medical students was urged by influential physicians. This was done, and it became the standard code of professional morality enjoined upon all practitioners in the British Empire. Two other editions were published after Percival's death. The first, in 1827, was edited anonymously, and is interesting because of the editorial notes exposing the medical evils of the time. At-

tacks are made on "diploma mongering" Colleges of Physicians of London and Dublin, and on the unworthy character of contemporary physicians. The last edition was issued in 1849 under the editorial supervision of Dr. Greenhill of Oxford.

The Classification of Heart Pain

Heart pain is classified by Paul D. White and J. Edwin Wood, Boston (Journal A. M. A., Aug. 18, 1923), as follows: 1. Simple fatigue pain: (a) Chronic hypertension; (b) aortic stenosis or regurgitation; (c) mitral stenosis; (d) pulmonic stenosis—congenital heart disease; (e) adherent pericarditis; (f) paroxysmal tachycardia or paroxysmal auricular fibrillation or flutter; (g) permanent auricular fibrillation or flutter with high ventricular rate, and (h) permanent coronary narrowing due to arteriosclerosis. 2. Nervous heart pain, including effort syndrome. 3. Paroxysmal heart pain (probably of coronary disease or irritability), the so-called true angina pectoris. 4. Pain of coronary thrombosis. 5. Aortic pain, of syphilitic aortitis and aneurysm. 6. Pain of pericarditis. Frequently, combinations of these factors occur.

Roentgenologic Diagnosis of Carcinoma of the Tail of the Pancreas

Two cases of carcinoma of the tail of the pancreas are reported by Thomas Scholz and Felix Pfeiffer, New York (Journal A. M. A., July 28, 1923). The roentgen-ray findings in both instances were so characteristic of gastric malignancy that a definite diagnosis of carcinoma of the stomach appeared justified. The clinical findings, on the other hand, were not very typical of any organic lesion of the stomach; in fact, there were, in the clinical picture of these two cases, several points which spoke against such a diagnosis. In both cases surgical intervention disclosed the tumor of the pancreas. An interesting clinical point is mentioned with regard to one of the cases. Schmidt has stated that bronzing of the skin in pancreatic lesions is always accompanied by sugar in the urine (bronze diabetes), this being due to an interstitial inflammation of

both the pancreas and the liver. An exception to this rule was the case in which there was a most characteristic bronzing of the skin without sugar in the urine at any time. Urgent call is made for a closer co-operation between clinician and roentgenologist, and an interpretation of roentgen-ray findings along clinical lines—in short, for clinical roentgenology, because in clinical roentgenology lies the further development of radio-diagnostic possibilities.

High Voltage Roentgen-ray Therapy

Sherwood Moore, St. Louis (Journal A. M. A., July 28, 1923), asserts that the high voltage roentgen-ray method of treating malignant disease accomplishes much in an otherwise therapeutically sterile field—that of advanced malignancy. However, it is an addition to and not a replacement of any agency at present used in the treatment of malignant disease. Patients with widespread extension and metastases should have less surgery and more radiotherapy.

Gastric Ulcers

That gastric ulcer can be diagnosed by means of the roentgen ray as definitely as can a fracture of an extremity, and, that if properly employed, the roentgen-ray test is far more accurate for diagnosis of ulcer than the Wassermann test is in the case of syphilis, is the claim made by Lewis Gregory Cole, New York (Journal A. M. A., July 28, 1923). The methods of studying the pathologic changes of gastric ulcers are: (1) necropsy, (2) biopsy and (3) roentgenology. The limitations of the first two methods are apparent. The scope of the third is unlimited, and the operation is relatively simple. By serial roentgenology with examination frequently repeated, one may study the gross pathologic changes of gastric

ulcer, the size and shape of the crater, the amount of induration surrounding it, its location in the stomach and its increase or diminution in size during periods of exacerbation or recession of symptoms, and may determine whether any cases of simple gastric ulcer ever become malignant. Different methods of employing the roentgen-ray in the diagnosis of gastric ulcers are (1) a fleck of bismuth subnitrate barium remaining in the crater of an ulcer; (2) symptom complexes, and (3) morphologic changes in the walls of the stomach. The first two are unreliable, and the last is accurate, as the pathologic change in the wall of the stomach can be definitely shown; it is on this, and this only, that the diagnosis can be accurately made. Many ulcers leave a scar, so that the roentgenologic appearance must be considered.

Purebred

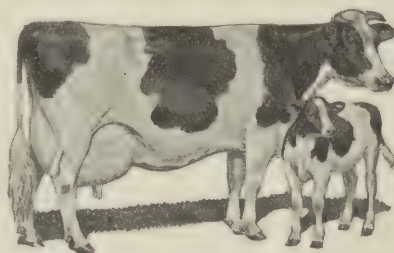
Holstein Milk

In a letter dated Nov. 22, 1922, Stephen E. Vosburgh, M.D., Superintendent of the Maine School for Feeble Minded, West Pownal, Me., says:

"We use them (pure-bred Holsteins) because the milk is more easily digested, is more palatable drinking milk, and, therefore, more important in the feeding of our children." This school owns a herd of 105 Holsteins.

The superiority of the Holstein cow has long been recognized. Visit the public institutions or sanitarium; if they produce their own milk you will undoubtedly find that the majority have Holstein herds.

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SYMPOSIUM ON OBSTETRICS

OBSTETRICS IN THE AVERAGE HOME*

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Valdosta, Ga.

The physician who only practices obstetrics in a well appointed hospital will listen with a tolerant mind to this paper, remembering that it is from a small town doctor—to other small town doctors, whose obstetric cases are most often one man problems and must be worked out without the assistance of trained helpers.

In the average home little and certainly no elaborate preparation is made for the delivery. Usually no sterile goods are furnished and for a nurse or assistant we are compelled to depend upon a negro mammy whose self esteem is in direct proportion to her age and ignorance, or some kind neighbor whose usual qualification is that she is willing and has mothered quite a numerable brood.

While we should always strive to conduct every delivery with the surgical technic of a major operation, some modification must be made in the home and with the assistants described above. Fortunately in most cases of normal delivery the only essentials for the practice of good obstetrics are cleanliness with non-interference for "meddlesome midwifery" is perhaps the most potent cause in obstetric morbidity.

It is to be hoped that the prospective mother has had prenatal care and been instructed somewhat in the hygiene of pregnancy, for "prenatal care means the protection of the mother (and likewise of the baby) from many of the complications which are apt to develop during pregnancy: first, from certain conditions due to pregnancy itself, as toxemia, miscarriage or premature birth, placenta previa and premature separation of the placenta; and second: when

other conditions or diseases are found which affect or are affected by pregnancy—as syphilis, chronic diseases of the lungs, heart and kidneys, and the acute infections" (reference No. 1).

Early recognition being necessary for early correction or treatment of these complications, we must impress our patient with the importance of medical observation throughout the pregnancy.

A careful physical examination is made of the patient as soon as she reports her condition and if it be her first pregnancy or if a history of previous difficult labor is given, this examination should include measurement of the pelvic diameters. Following this preliminary examination the blood pressure is taken and the urine examined each month until the last six weeks, when the interval should be shortened to two weeks unless there exists some condition calling for more frequent tests. At time of taking the blood pressure the exercise, sleep, bowel movements, diet, and other questions of hygiene should be discussed. During the last week or just before the expected date of confinement determine the position of the baby in utero, the heart rate and the point of greatest intensity of the heart sounds.

The patient is instructed to call her physician soon after the beginning of regular labor pains. It is best to see her immediately and note her general condition, including her temperature, pulse, and blood pressure; the duration of the pains and the interval between them, any discharge or "show" that may have appeared, and confirm the findings of the previous examination regarding the baby. If the position of the baby is thought to be normal no vaginal examination is made at this time. She is instructed to have a warm soap-suds enema followed by a sponge bath.

During the first stage it is not necessary to remain with the patient constantly but we should keep within easy reach, for the unex-

*Read before the Medical Association of Georgia, Savannah, May 2-4, 1923.

pected often happens and it is impossible for anyone to say definitely how long the first or second stages may last. The patient may sit up and walk about provided the waters are unruptured, until voluntary bearing down—the second stage—begins, when she should stay in bed; but she must not be permitted to waste her strength by premature and ineffective efforts at bearing down. If she complains much of the pains, one-half strength H. M. C. hypodermically, or ten grains chloral with twenty grains sodium bromide by the mouth is given. Either of these may be repeated as necessary. A good plan, I think, is to relieve some of the early pain and nervousness with one-half H. M. C., later giving one or two doses of the chloral and bromide, and beginning obstetric chloroform or ether when well along in the second stage, deepening the analgesia to a complete anesthesia during the last one or two pains.

For convenience in cleaning up after delivery, the right side of the bed is prepared with an oilcloth or rubber sheeting and pad under the sheet and another oilcloth and large pad over the sheet. If no oilcloth or rubber sheeting is available, in these days of large Sunday newspapers it is always possible to substitute a very thick pad of paper. When ready for bed the patient puts on a fresh gown, which is kept high under the shoulders to avoid soiling during the labor.

Towels, large and small gauze pads, perineal guards, cord tape and dressings, two pair of rubber gloves, two pair of scissors, with three or four hemostatic forceps, and obstetric sutures, all of which have been sterilized previously in canvas wrappings, are laid out on a table or trunk in convenient reach of the bed but are not opened up until needed. On the same or another table is put a bowl of cyanide or lysol solution. Boric acid, cyanide tablets, lysol, pituitrin, hypodermic case, tincture of iodine, one per cent nitrate silver or 25 per cent argyrol, dropper, chloroform, ether, inhaler, liquid soap, and hand brush may also be put where they will be convenient when needed. A slop jar on the floor nearby and at night the best available light shining over the foot of the bed, completes the setting.

We are taught now to make rectal examinations instead of vaginal because of the increased morbidity due to the latter, even when sterile

rubber gloves are used; however, the important thing is to obtain a sufficiently clear mental picture of the conditions present in the maternal pelvis and for this reason Harrar of (2) the New York Lying-in Hospital prefers that the routine examination be made vaginally and examinations to determine progress in slow labor, be made through the rectum. The first, and except in retarded labors the only examination I make is done when the patient seems to be in the early second stage, to determine the degree of dilation and thinning of the cervix, the presentation and position of the presenting part, the propulsive effect upon it of the pains, and the comparative size of the presenting part and the maternal pelvis. For the vaginal examination the hands are scrubbed and soaked and prepared as for a surgical operation and sterile gloves put on. If subsequent examinations should be necessary the same sterilization of hands and gloves must be repeated each time, but no matter how well developed our surgical conscience, vaginal examinations should certainly be limited to the fewest possible number.

Preparation of the patient for vaginal examination and the usual normal delivery, should include a dry shave if there is much vulval hair. The external genitals are wiped off and any discharge removed with sponges of sterile gauze wet but not dripping with lysol solution.

If any vaginal manipulation or operative interference is to be made the external field is painted with diluted tincture of iodine or saturated alcoholic solution of picric acid and the vagina scrubbed out with green soap.

Johnson and Sidall (3) of Baltimore, noting that women delivered precipitately before any preparation could be made, rarely had a febrile puerperium, made the experiment through a series of cases on every alternate patient, omitting the hospital routine antepartum preparation, clipping only the vulval hairs. In this series the unprepared gave a febrile puerperia of 12.4 per cent as against 16.3 per cent in the routinely prepared. As the incidence of vaginal examinations, premature rupture of membranes, and perineal lacerations was the same as before, they concluded that the usual hospital preparation which consisted of much scrubbing of the external genitals with green soap and water and the further pouring over of alcohol and weak bichloride solutions, was

not only unnecessary but positively harmful.

"Patience in obstetrics is next to asepsis but it must be the active patience of close observation; not the passive patience of ignorance, allowing the mother to become totally exhausted or the baby in imminent peril of death before determining on a line of action." (2) Harrar of J of Obs and Gyne, March 23.

The obstetrician must know what is going on. A thorough familiarity with the normal mechanism of labor with a clear mental picture of the conditions in the pelvis of his patient are necessary for recognition of a departure from normal and to know how and when interference is necessary to conserve the interests of the mother or child.

If the first pelvic examination shows the cervix not dilating satisfactorily a hypodermic of one-quarter grain morphine is given because a rest under morphine will relax a thick hard cervix with a minimum of effort and when labor starts up well again a rested patient with a relaxed cervix will have effective pains. After full dilation of the cervix with a moulded head well down in the pelvis two to four minimum doses of pituitrin at twenty to forty minute intervals may be given as a whip if necessary; but if the mother shows signs of exhaustion, or the baby's heart sounds are very rapid or irregular it is better to terminate labor by a forceps delivery.

If the membrane does not break spontaneously the bag is not ruptured until it shows at the vulva unless it becomes necessary to afford relief to a tender over distended uterus or for some operative interference.

Before the perineum begins to bulge some one of the ever present friends is shown how to give the chloroform during the pains. As the presenting part comes down and the perineum stretches, a sterile towel is laid over the bed pad and the field is kept clean by wiping off any discharges with the moist gauze. Nothing is done toward protecting the perineum except to keep the presenting part crowded well up against the pubis and holding the patient under good control. With the last few pains, she is not allowed to aid by voluntary effort, anesthesia is deepened, and the head or presenting part is shelled out between pains. If the perineum shows signs of an impending tear it is cut down through a central line with scissors because it

is much easier to repair a straight cut than a ragged tear.

After delivery the baby is laid on the right side, the mucus wiped from the mouth and throat and the eyes cleansed with sterile gauze. It is covered with a warm blanket and left alone as long as the color is good and there is strong pulsation in the cord. No alarm need be felt if it does not breathe well for some minutes. As soon as the pulsation stops or weakens the cord is tied or clamped and if breathing is not yet begun some method of artificial respiration or stimulation is practiced. When regular respiration is established the baby is handed over to the mammy for an oil bath.

The perineum is now inspected and any tears unless extensive are repaired immediately, that is, the sutures are put in under a light anesthesia, held with forceps until the placenta is delivered and then tied. Repair of extensive lacerations is delayed until a more proficient anesthetist can be gotten as more time and a deeper anesthesia is required.

If the placenta is not expelled immediately it is my custom to wait about thirty minutes and then attempt by expression, not to vigorously applied, to deliver it. No pituitrin nor ergot is given until the uterus is empty as I have had several cases of hourglass contraction following small doses of pituitrin given just before or larger doses immediately after the end of the second stage. The uterus should be well contracted and stay so after the placenta is delivered. If everything is well, the blood and discharges are wiped off of the external genitals and thighs with gauze dipped in cyanide or lysol solution and a sterile perineal pad is put on. The patient is rolled on the right side and the back and left side cleansed, the top bed pad folded under her and a fresh pad rolled half up, put in its place. She is then rolled to the left side on to the fresh pad, the right side and back cleansed, the soiled pad removed, the fresh pad straightened out and the patient turned on her back with a clean sheet and blanket over her and allowed to rest.

The baby's eyes are then looked after again and silver solution dropped into each. The cord is dressed and the mouth again drained of mucus if necessary. If it is a male the prepuce should be examined and adhesions broken up if necessary or if only a pin hole opening is pres-

ent he should be circumcised when about ten days old.

It will require an hour at least after the baby is born to carry out this program if everything goes off well, but an hour is the minimum time that an obstetrician should stay with his patient after delivery. Before leaving the baby is inspected to see that the color, respiration and heart action are right and that there is no bleeding from the cord; the mother is examined to make certain that the uterus is firmly contracted, that the bleeding is no more than normal, and that the pulse is not much above her normal rate.

On account of the tonic effect on the uterine muscle, fifteen grains of quinine is given daily for three or four days. Castor oil or Cascara is given on the second or third day if required but is omitted if the bowels are acting regularly.

The external parts are cleansed daily with cyanide solution but no douches are given, not even the "pitcher douche" after a perineal repair because it has been proven that frequent pitcher douches give poorer results than if the perineum is let alone. (3).

The patient is seen on the first, second, third, fifth, seventh and tenth days of the puerperium unless some reason for more or less frequent visits arises. During the fifth week she is again examined to note the condition of the perineum and the cervix, the size and position of the uterus and the character of the vaginal discharge, if any. Deviations from a normal condition such as unhealed cervical tears, subinvolution, or retrodisplacement, can and should be corrected now and the patient released with little or no damage from the ordeal through which she has passed.

Under conditions found in the average home good obstetrics may be practiced; first, by conscientious antepartum care, that the mother may go into labor in the best mental and physical condition.

Second, by the exercise during labor of the virtues of patience, that meddlesome interference may not be made; and of cleanliness, that no outside infection be carried into the genital tract; both being supported by a thorough familiarity with the mechanism of labor, that any departure from normal may be promptly rec-

ognized and corrected. Third, by the prolongation of post partum care, not for days but for weeks, that the rehabilitation of the mother may be complete.

References:

- (1) Rice, September, 1922, J. of Obs. and Gyne.
- (2) Harrar, March, 1923, J. of Obs. and Gyne.
- (3) Johnson and Sidall, J. of Obs. and Gyne., December, 1922.

OBSTETRICS IN PRIVATE PRACTICE WITH REFERENCE TO INFECTION*

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In May, 1922, at the meeting of the Medical Association of Georgia, held in Columbus, I reported 1,000 obstetrical cases without infection and a very low mortality. Since this report, I wish to add 100 more cases with the same results.

Puerperal infection and mortality in obstetrical practice should be and must be very much lower if we wish to advance in this line of medical and surgical science. This can only be accomplished by the proper precautions on the part of the physician and with the co-operation and intelligent understanding of the expecting mother. Obstetrics is both medical and surgical and should be treated as such. I will endeavor to give briefly my method of handling these cases in private practice.

The chief factors which should enter into obstetrical practice are: elimination, asepsis and antisepsis.

In order to reproduce itself nature has thrown around the reproductive organs of the female certain protective forces to safeguard the expecting mother. Not only is this true in the human race but in the animal kingdom as well; and if left alone it will reproduce itself in a great majority of cases without mortality to its species.

Infection is carried in from without, and is introduced into the vagina through some outward means. If this be true, we should ever be on our guard to eliminate this great enemy to womanhood.

I attribute my success, so far as infection is concerned, to careful technique, both before and

*Read before the Medical Association of Georgia, Savannah, May 2-4, 1923.

after delivery. In my private practice, I endeavor to have the expecting mother to place herself under my care as early as possible. First: a careful physical examination is made of the entire body, taking special care to note any abnormalities of the heart, lungs, kidneys, liver and pelvic outlet. Special attention is also given to the blood pressure, and if above 140 systolic, the patient is put on restricted diet, free elimination and confined to bed. A careful laboratory examination is made of the urine, blood, vaginal smear and Wasserman.

I then give instructions as to the mode of living, namely: diet, exercise, rest and clothing. Out of door exercise is a great factor in obstetrical practice and in all these cases, unless there are some contra-indications, they should be required to take walks daily and remain out of doors as much as possible.

Second: I instruct the patient as to how very important it is for free elimination to take place through the bowels, kidneys and skin. In order to make this possible, I urge them to drink water freely, take daily baths and necessary laxatives. After the fifth month, I give bicarbonate of soda one dram, two or three times daily every alternate week. Also once a week some form of calomel, such as calomel, rhubarb and colocinth.

When there is nausea and vomiting, especially in the earlier months of pregnancy, I find that bromide of soda grains 40, chloral hydrate grains 20 and syrup of tolu drams 2, in a cup of hot water by rectum, two or three times daily will give relief. This is especially good in pernicious nausea and vomiting.

Third: I require these cases to report to my office once every fifteen days for the first five months. At this time the blood pressure is taken and a urinalysis made.

Fourth: After the fifth month the patient reports to the office every ten days until such time as she desires to remain in; after which time the urine is sent to my office for examination every ten days until the time of delivery. By this means we are able to keep in constant touch with our patient and to watch most carefully that she is eliminating all toxic matter. If this treatment is carried out, we have the best preventive for eclampsia and this dreadful condition is eliminated.

At the time of delivery, I do not interfere at

all during the first stage of labor, unless it is long drawn out, and then I carry them through this stage with Morphine grains $\frac{1}{4}$, and extremely nervous cases are given some form of bromide and chloral hydrate.

At the beginning of the second stage of labor, the patient is prepared for delivery, disinfecting thoroughly the internal and external vaginal orifices, and emptying the bladder and rectum. After this is done the patient is draped for delivery.

After having cleansed my hands as for an abdominal operation, I am prepared to assist in the delivery. I make the vaginal examination and usually keep the first two fingers in contact with the presenting parts until the delivery is over. By this method, I actually know what each pain is doing and thereby eliminate repeated examinations at this stage.

As already stated, I prefer the vaginal examination to the rectal as I have never been able to be convinced that as accurate a diagnosis of the presentation can be made by the rectal route as by the vaginal, and it seems to me that there is more danger of infection by the rectal examination, unless there is a very liberal supply of sterile gloves and a fresh pair used for each examination. This procedure would be almost impossible for the ordinary practitioner.

Again, in these cases there is always more or less irritation, congestion, hemorrhoids, etc., around the rectum, making a rectal examination very painful, especially in a neurotic patient. Also, there is, after this examination, more or less smearing of fecal matter over the parts.

In regards to the delivery, I believe that after the cervix has been thoroughly dilated, in order to conserve the patient's strength and to keep from lowering her vitality and resistance, a quick delivery is indicated instead of the prolonged delivery. This is not only much safer for the mother, but for the baby as well, and my records show that in following this procedure the stillborn infant is far less than in the protracted delivery.

Here, I may also say that the cervical and perineal lacerations are not any more frequent than they are when the delivery is delayed.

To accomplish this, I give from one-half to one cc of pituitrin. I have made a careful study of this drug, its uses and abuses, since it came

into obstetrical practice and I agree that in the hands of a novice, it can do much damage, not only to the mother but to the child as well.

This drug has been very much abused and for that reason it is being outlawed by a great many obstetricians. In my opinion it has a place in obstetrics second to the use of anesthesia as an aid to suffering womankind.

Pituitrin should never be used in placenta-previa, it should not be used until the cervix is thoroughly dilated and parts presenting. It should not be used in abnormal presentations such as: shoulder, brow, face or hand until these abnormal presentations have been corrected into a normal presentation.

Pituitrin causes a firm contraction of the uterus, squeezing out so to speak, any debris that may be retained in the uterus following the delivery of the placenta. It also keeps uterus well contracted after the delivery and I notice that in the cases of the multiparae that they suffer very little with the after pains, which is a great relief for those who have suffered for the usual three days.

If I find that the uterine contractions are too severe after the use of pituitrin, I control same by the use of an anæsthetic (ether or chloroform) and in fact, if the anesthesia is pushed, the uterine contractions can be ceased entirely, if so desired. Why, then, condemn an agent which will shorten labor from four to twelve hours?

Since using pituitrin in my work, it has practically eliminated high forceps deliveries. I would like to say in reference to the use of forceps, that I do not allow the head to remain pressing upon the soft parts longer than one hour. At this stage of labor where the uterine contractions are not sufficient to force the head through after waiting an hour, I think it much safer not only for the child but for the mother as well, to apply forceps and deliver. Where the head does not descend and delivery is imperative I much prefer doing a version or a Caesarean Section to high forceps. We must consider both mother and child and endeavor to carry both safely through, therefore we should select the safest method which will conserve the life of both.

After the baby is delivered, if there is no hemorrhage, I wait about five minutes and then deliver the placenta. I do not believe in allow-

ing the placenta to remain in the uterus for an indefinite period. The patient has already had pituitrin and by gentle pressure on the cord with the right hand and using Crede's manual contraction over the fundus of the uterus with the left hand, the placenta will deliver. No undue tension should be placed on the cord as same can be very easily detached from the placenta.

If there is hemorrhage, I give 20 minims of ergatole and by firm contraction on the fundus, immediately force the placenta out.

When the placenta is delivered it is carefully inspected so as to be sure that it is intact, if it is not the remaining part should be delivered at once.

After the placenta is delivered, I make a careful examination of the perineum. If I find a perineal laceration, same is immediately repaired, as I believe it is much better to repair these lacerations at this time. If the technique is good we will get primary union.

During the convalescence stage free elimination is continued as before delivery.

As above stated the chief thing for the obstetrician and general practitioner to consider is cleanliness. Before delivery the hands should be aseptically clean. The patient's vaginal orifices, both internal and external, should be well cleansed. The physician or obstetrician should never handle pus with the bare hands. I have made it a rule for the past twelve years never to touch pus in any form without gloves, for this is one of the most common modes of carrying infection.

I would like to emphasize also that another very common mode of infection is a small portion of placenta left in the uterus, where it undergoes decomposition, thereby giving a fertile bed for the growth of bacteria.

By following the outline which I have given you, I have records showing 1,100 deliveries with a mortality of six. Three of these were due to the influenza epidemic in 1918. Two were due to acute nephritis, where the kidneys would not functionate. One was due to post-partum hemorrhage due to placenta previa.

In conclusion let me again urge all those who are doing obstetrics to:

First: Educate all expectant mothers to

place themselves under the physician's care at an early date and impress upon them the importance of assuming the proper care as two lives are involved.

Second: Make a careful physical examination as well as a pelvic examination, especially in primiparae.

Third: Advise your patients in regard to exercise, rest, food and clothing.

Fourth: Examine urine often during the nine months of gestation and watch the blood pressure.

Fifth: See that the patient eliminates toxins during the period before and after delivery.

Sixth: The time to treat eclampsia is in the early stages of pregnancy by keeping up a free elimination of toxic matter.

Seventh: Keep your hands free from infection, when handling pus wear gloves.

Eighth: Practice asepsis before and after delivery and see that the nurse does the same.

Ninth: Examine the delivered placenta carefully, remove any detached portion which may be left in the uterus.

Tenth: The use of pituitrin for firm uterine contraction.

Eleventh: Repair perineal lacerations at the time of delivery.

If these few and simple procedures are carried out puerperal infection will be eliminated.

SOME GENERAL REMARKS ON THE PRACTICE OF OBSTETRICS*

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The purpose of this paper is a plea for more conservatism in the practice of obstetrics. Fifteen years experience in private practice with the average number of gynecological patients has helped to fix on my mind the importance of the practice of obstetrics. We are all familiar with the expression: "Doctor, I was all right until my first baby came. Since then" a thousand and one complaints of which you are all familiar. One cannot help being impressed that labor is not the physiological process that it is supposed to be; that nature or the physician, one or both, must fall very far short. Statistics tell us that tens of thousands of mothers are lost every year in the United States, and many others rendered almost invalid from this cause. The facts are

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that a very small per cent of women pass through this ordeal without more or less pathology. Dr. Lee says there are none who pass through it without some pathological marks. It is for these reasons that I wish to call your attention to the subject.

The practice of obstetrics is as old as the human race, and I sometimes wonder if in the management of the normal case, we have made a great deal of progress as we have advanced down the centuries to the present time.

Upon these premises I propose to discuss with you for a few minutes the conditions which we as obstetricians are most often called upon for relief by the pregnant woman and the management of same. I would have you keep in mind, if you please, the subject of conservation of the mother, her health and physical well-being, and of the child.

(a) Usually the first thing about which the doctor is consulted is nausea and vomiting. This sometimes proves a very distressing thing and is sometimes very dangerous to mother and child. Without discussing the various theories as to the etiology of this trouble the treatment being the thing with which we are mostly concerned in actual practice, I will proceed with the management. A goodly number of cases will respond to the ordinary digestives, a number of them will yield to elimination, but there is a certain per cent of these cases which are very obstinate. With this class of cases, it is necessary to seek for the cause. One of the most common causes in my experience, has been irritation of the cervix. I have had a number of cases which resisted all treatment, that is, stomachic, dieting, lavage, elimination, rest in bed and even corpus luteum hyperdermically, when upon careful examination an inflamed cervix was found and the symptoms readily cleared up following painting with 20 per cent silver nitrate, followed by tampons of ichthyol in glycerine, followed by irrigations of warm salt solution. There are various rules set out by different authorities for the indication for operation in these cases. Some advocate operation when there is a persistent temperature and the circulation reaches 120 per minute. One case which I recall ran a temperature from 99 to 101 and circulation ranged from 110 to 140; with practically nothing being retained on the stomach for a number of days. Patient was removed to the

hospital with the idea of operating as a last resort, but a more thorough examination proved the cause to be from irritation of the cervix and the case promptly yielded to the treatment above described. It has not been my misfortune to be compelled to operate on any of these cases. Let's not be too ready to empty the uterus for this cause.

(b) Threatened abortion:

We are all familiar with the symptoms of this trouble. Rest in bed is the first indication. Uterine sedatives and sometimes opium will control these cases unless abortion is inevitable. I believe that in all cases where there is doubt as to whether abortion is complete, that the uterus should be explored. I do not advocate the expectant plan of treatment in these cases. There is always risk of sapremia and a great many times infection if there are any retentions. I do not see how there could be any risk in emptying the uterus by an experienced operator with the proper precautions as to sepsis and asepsis.

(c) Toxemias of pregnancy:

We are all familiar with the theories as to the causes of the toxemias. We are also familiar with the treatments in vogue. The lighter cases are very amenable to treatment. In cases of convulsions before the end of term we are sometimes confronted with the question of emptying the uterus. Most of these severe cases, however, will yield to proper eliminative treatment. It is my custom to control convulsions first and then to eliminate. For the control of convulsions, I depend on chloroform, morphine, veratrum, and venesection. I know some object to the opium treatment, but I have not have occasion to regret having used it. It gives the patient rest, controls convulsions and I think hinders very little in elimination. Venesection is almost a specific in a goodly number of these cases. I bleed for results, sometimes 8 ounces, sometimes 30. After this, I start elimination by giving calomel in large doses followed by salines in the same way. After thorough purgation a diuretic, digitalis and some of the sodium or potassium salts, is begun. This procedure with proper diet and sufficient length of rest in bed will relieve most of these cases. I have not had to operate for this; have had only one case in which labor was induced before term (8 months, and mother and babe both did well).

(d) In the management of labor itself, I

plead for more patience and perseverance on the part of the practitioner. We are all familiar with the enormous amount of morbidity following this event which could be prevented by a little care on the part of the physician. I think one of the greatest curses to the mother is the hurry which we sometimes think we are in. We always have sufficient time to give nature a reasonable length of time to accomplish this act. There are two stages in labor at which I feel that any attempt to hurry nature cannot be too strongly condemned, and that is, when the head is passing the cervix, and through the vulva. These are the places where we get our tears and at these stages we want the head to proceed very slowly and be thoroughly controlled. I believe in this way that we can prevent a great many of the deep cervical tears which we sometimes see. A great many times the appeals of patient and family will cause one to be too hasty in applying forceps in order to get the patient out of her sufferings, and in this way we get injuries that we might have otherwise avoided, and once instruments are applied, it is one of the very hardest things I ever tried not to deliver too quickly. Pituitrin, too, is responsible for a great deal of suffering and pathology. It is a very useful drug in proper cases, but one also capable of incalculable harm. Anything from precipitate labor to ruptured uterus may follow in its wake, not to mention its action in case of fatty heart. I know of two cases of ruptured uterus occurring in my section in the last few months from its use. After labor is completed, it is my practice to give ergot. I feel always much safer after my patient has had a dram of ergot or one-half dram of ergotole, even though there is not any hemorrhage. In cases of prolonged labor, or when much pituitrin has been given, and where it has been necessary to administer much chloroform, I use the ergot before the third stage has been completed. I know I will be criticised for this by some, but it has always been my practice and I have never had occasion to regret it; neither have I had to do a manual delivery of the placenta.

No man should leave his patient without first inspecting the parts and fixing the tears. There can be no excuse for this except in cases where the patient is in very extreme condition, and then one should return later and do them, anywhere up to 24 hours. A lack of time and a lack

of conveniences should never be an excuse. We sometimes get the best of results under what appears to be the worst surroundings. I recall a case of complete laceration in a primipara, the baby being born before I arrived, where I got the most beautiful results after repair and instructing the mother-in-law how to give pitcher douches. Of course these are not ideal conditions, and but very few of these injuries are obtained under ideal conditions, therefore, I argue that all these cases should be given the benefit of the very best that can be done for them.

(e) Placenta Previa:

This condition is one that should always have hospital treatment where possible. If the condition is partial, packing and waiting for complete dilatation and quick delivery by forceps, if need be, will usually get us by this difficult condition. If it were possible, all cases of complete placenta previa, unless there were strong contra-indications, should be met by Cæsarean section. I have used the expectant plan and got them by with it—in some cases losing the baby, and have had the opportunity of doing the Cæsarean operation which I find to be much easier and safer for the patient with a greater chance of delivering a live baby if done in time.

(f) Post Partum Hemorrhage:

This very alarming condition is sometimes met with. We sometimes anticipate it and can be prepared to meet it. At other times it comes unexpectedly. The preliminary dose of ergot is always a preliminary step in the prevention. If the fundus is carefully watched for an hour after labor, a great many cases will be prevented. Firmly holding the fundus, the administration of ergot and the elevation of the foot of the bed, has always gotten me out of this trouble.

As to the baby, statistics show that more of the human race die on the day of birth than any other day. Five per cent are still-born, and 1½ per cent die during the first few days following; also that more babies die from inadequate antenatal care of the mother than from lack of care, improper feeding, and all the infectious diseases combined; so here too is a field for conservation.

We are dealing with life at its source and also with the very fountain of life, so we cannot be too mindful of these sacred obligations and duties, or too diligent in the faithful performance of the least detail that will enable our

mother to give birth to a well, uninjured baby which will be capable of living and thriving by itself, at the same time leaving her as nearly sound as possible.

However, be it said to the credit of the profession, that not all the cases given by statistics were attended by doctors. I bring this subject before you not with the thought that it is anything new, but I do want to make this earnest plea, that we do leave our maternity cases in better condition. We cannot always prevent injury, but most certainly almost always can repair them. Then in the name of humanity, in the name of God, let's do it.

DISCUSSION ON THE PAPERS OF DRS. J. F.

MIXSON, MARION T. BENSON, AND L. A. BAKER

Dr. George L. Echols, Milledgeville—It is a common occurrence at the State Sanitarium to receive female patients with a history that their psychosis started about the time of delivery, and the etiology given as childbirth. Of course, some of these cases are frankly toxic, others are not. It is always a wise procedure to study the history of the case carefully before giving a prognosis too favorable.

Three weeks ago I was called to see a white female patient who had been delivered ten days previously, and two days after delivery, showed marked mental symptoms. I found her very much depressed, crying, reading the bible, saying that she was a very wicked woman, had done a great deal of harm, and did not deserve to live. Fearing suicidal attempts it was advised to send her to a mental hospital, and a suicidal attempt was intercepted within twenty-four hours, which hastened patient being sent to a hospital for Mental Diseases. A careful study of the history showed marked unpleasant home surroundings, a dissipated husband whom patient suspected of having contracted syphilis, and financial conditions which made it undesirable on her part to attempt the support of another child. As soon as patient found she was pregnant, she lost much interest in her surroundings, and made no preparation whatever for the expected baby. Her conduct during pregnancy was a little unusual, but the family had kept this a secret from friends and from the family physician. Results in such a case will be obtained by treating environment more, and treating an imaginary toxic condition less, however, as we said in the beginning, some of these cases are frankly toxic.

Four weeks ago a white female patient was admitted to my service who showed mental symptoms on the day following the delivery of her third child. Symptoms manifested were getting out of bed, talking a great deal, hard to control, etc., and a few days later a homicide was barely prevented when patient got a pistol and tried to shoot a calling bill

collector. This was followed by a maniac outbreak during which she showed all the cardinal symptoms of Maniac-depressive insanity. The history showed the following features: A girl brought up with plenty; finished college. At nineteen ran away and married a widower forty-six, for which her father disinherited her, and a year previously, her husband lost all his property, leaving patient penniless. Thus we have undue mental stress and undue physical stress coming together, and we should not be surprised at a mental break-down.

Dr. W. A. Mulherin, Augusta—Dr. Benson, if I understood correctly, said that confinement cases were medical and surgical, but did not say they were likewise pediatrical. Dr. Mixson in his discussion touched lightly on the care of the newly-born, and while it may be a little germane to Dr. Benson's paper, I would like to say a word about the newly-born.

In the course of everyday practice the physician, or obstetrician, as the case may be, accepts the responsibility of the newly-born. This is as it should be, provided the physician, or obstetrician sufficiently qualifies to accept this responsibility, and will give proper consideration to the infant.

It is said today that some confusion and misunderstanding exists between the obstetrician and pediatrician, as regards who should take care of the newly-born baby. I think this is an exaggeration, for I feel quite convinced that the pediatrician has no desire to butt in on the obstetrician's work, but is chiefly concerned in the welfare of the baby. By this I mean if some obstetricians will only cease giving as little attention to the new-born baby as they give to the after-birth, and will recognize that the most important time in a baby's life is the first few days of its existence, there will be no complaint heard from the pediatrician.

The pediatricians are not quite as bad as they were painted by an obstetrician who discussed a paper read before the Pediatric Section of the Southern Medical Association, in which he stated that before long the pediatricians would want the obstetricians to arrange it so conveniently that all the pediatricians would have to do would be to touch a button and have the baby drop in their laps.

It is generally conceded that infant mortality, at the present time, is too high. There are many more babies dying than should die. I feel it is no exaggeration to state that some physicians treat the baby too much as a by-product. About the same consideration is given the baby as is given the after-birth, even though two lives are under consideration. If the obstetrician will accept the responsibility of caring for the babies, for instance handling congenital atelectasis—that is making the child cry to open its lungs and save a little life—or successfully treating asphyxia, he likewise should be qualified to advise the proper nourishment for that baby. This is a field in which the pediatrician does not want

to enter. What concerns the pediatrician is to give the baby a square deal.

Dr. R. F. Wheat—I desire to say a few words on these three excellent papers which I have enjoyed very much.

As to the anesthetic in these cases, years ago I used to use chloroform in most cases of obstetrics and never had a fatality. Then a friend of mine, member of a prominent family, died from the use of chloroform, and since then I have used ether all the time. Some say it stops pain, and that if you do not give it to the extent of complete anesthesia it will not do it. Chloroform is said to be twenty times more dangerous than ether, and why not use the safer anesthetic?

One other word in reference to Dr. Mixson's paper. When he could not get dilatation or relaxation of the perineum he made a posterior slit or cut. I prefer episiotomy, and De Lee recommends it in all primiparae. One reason is that it leaves the perineum in a strong condition in subsequent labors, and another thing is, if you do episiotomy or make a lateral cut you do not get a complete tear into the rectum, whereas if you cut posteriorly you are liable to get a tear in the rectum and leave a scar which in subsequent labors may cause a tear into or almost to the rectum.

Dr. Benson in discussing the relief of pain before giving the anesthetic mentioned the use of morphin in one-quarter grain doses. I have used that myself a number of times. I thought it was a great thing to let the woman rest. I had three youngsters that were fully developed and weighed from nine and a half to ten pounds, but it took me half an hour to resuscitate these children. I thought one of them was gone. Since that time I have used chloral. If I give morphin I give it in one-eighth and not one-tenth grain doses. I prefer cutting the dose down to one-eighth of a grain if I give morphin.

I agree with Dr. Benson not to use rectal examinations. It is hard to keep from contaminating the gloved hands with the rectum. I believe in making as few examinations as one can possibly make.

Dr. William H. Myers, Savannah—There were two subjects brought before the meeting this morning of very great importance, one of which was appendicitis, and it was pointed out that the mortality from that disease has not been reduced within the last twenty-five or thirty years. Statistics show that the mortality is just as great today as it was formerly from appendicitis. Some of the speakers said that education was very necessary. The other question that has been brought before us for discussion is the one of obstetrics, from which mortality has not been materially reduced from what it was twenty-five years ago. We can talk about delivery and what to do with these women, but we do not reduce the mortality by that. We have to take these patients before the time of confinement is expected, and ward off those things that are causing the mortality. The thing that is causing most of the mortality, I believe, is toxemia, and unless we give patients more

careful attention we will continue to have the same results. By taking the blood pressure once a week, examining the urine once or twice a week, in the last three months of pregnancy, we are going to help a great deal. We cannot be too careful in such cases. I could cite you examples of several women, primiparae, who never had nausea a single day during pregnancy. There was not the slightest pathology to be found in the urine, or any edema. The blood pressure in these cases was taken every two weeks. The urine was examined every two weeks in one of these cases, and it was found that her blood pressure jumped up to 160. I told her to go to bed and stay there and I would see her later in the day. The urine was perfectly normal during the day. I saw her again about 5 o'clock in the afternoon, at which time her blood pressure had jumped from 160 to 200. I had her taken to the hospital, made an examination and found the os well dilated, which was very gratifying. Labor went on without interruption. She was given gas oxygen anaesthesia and delivered. After delivery her blood pressure rapidly dropped and soon reached normal.

We have to observe these patients more closely than we have done in the past, and to do that we have to educate them as well as ourselves. We must be careful to do our duty and educate the laity to call upon a physician to get information and receive attention. Along this line I may say that mid-wives and these old "mammies" that go around, do more harm than we can overcome by any small amount of education.

I recall the case of a woman who came in from the country. She had not seen a physician. She came forty miles distant. She had orthopnea so that she could not lie down. She coughed every few seconds; her urine was loaded with albumen, and her blood pressure was 175. She looked as if she were going to die, and if we had not had recourse to local anesthesia and gas oxygen anesthesia the woman would have died. Ether or chloroform would have proven fatal in a short time. With the gas oxygen anesthesia and local anesthesia in the abdominal wall, both the woman and baby survived.

With reference to the use of ergotol in hemorrhage, I do not know that there is much advantage in using ergotol if you have pituitrin. Pituitrin answers every purpose that ergotol can, and does it more effectively. I have quit using ergot for the simple reason that if you have any trouble you will find pituitrin will act much better, and if there is no trouble, there is no necessity to use either. It is a custom and people expect you to give ergot, and lots of us yield to the temptation to follow the old custom.

Dr. Baker, I think, sounded a note of warning with regard to the use of pituitrin. I think it is a dangerous agent unless used judiciously. If it is used judiciously it is a valuable agent. I know of one instance where the uterus was ruptured and the patient died as a result of the injudicious use of this substance, and I would like to add a word of caution to what Dr. Baker said regarding the use of it.

With reference to gas oxygen anesthesia, I think the mother is entitled to it. This is the best thing we have gotten up for the relief of pain in childbirth, and it behooves us to give it. I am a strong advocate of gas oxygen anesthesia in obstetrics.

Dr. C. M. Curtis, Atlanta—I think we have had the best and most interesting list of obstetrical papers that I have ever heard anywhere. They have been very instructive. In these busy days of the practitioner it is very easy to get in too much of a hurry with obstetrical cases. I treated my first obstetrical case thirty-five years ago. Since that time I have seen over 1750 children born. Of that number I have only had one case that demanded Cesarean section, and both mother and baby are living today. A great many of our troubles and nearly all cases for surgical interference come from being in a hurry, not waiting until nature has had time to bring about results. There are times when surgical intervention has to be undertaken.

When I have an obstetrical case on hand I tell other patients that I am too busy to see them, for if there is any patient that needs close attention it is that patient who is attempting to bring forth a child.

I have used a great many different things during the time I have been practicing medicine to try to relieve pain in these cases with very little success with any of them. Years ago I used the H. M. C. tablets; I have used scophamine to produce twilight sleep; I have given chloroform and ether, but I have found mental suggestion is the best remedy for the patient. If you can jolly the patient up by taking her mind off of the subject and by telling her some story so as to change her way of thinking, you can accomplish a great deal. So for the last several years I seldom give anything at all. I think pituitrin is a valuable agent for the physician who is in a hurry; at the same time, I think it causes a great many lacerations. Chloroform is a good thing to relieve pain, but not always.

I am going to tell you briefly about a case that occurred during the third year I was engaged in the practice of medicine. In Wilcox County there was a man who wanted me to see his wife. I said to him, "how far is it?" He replied, "It is about fifteen miles." When I undertook the journey I thought it was about thirty. This woman was having convulsions every time she had a pain. I said to her, "How long have you been sick?" The reply was, "nine days." "How many doctors have you had?" "All the doctors in Wilcox County except yourself." Well, I saw I was up against a proposition. I began to try to find an excuse to get away, but could not think of any. I was informed that some of the doctors gave her whiskey and she would feel better. I said, "Have you any whiskey in the house?" "Yes, a quart." I then said, "Drink all the whiskey you want." She said, "we have no glass; give me the bottle." She took the bottle and it seemed to me as though she drank half a quart of that whiskey before she stopped. She did not have another convulsion and in six or eight hours, the baby was born all right.

(Laughter.) I have used whiskey under the same conditions frequently since that time usually getting good results. One thought I wish to stress, give the obstetrical patient plenty of time and attention and do not be in a hurry to give surgical assistance. Billions of babies were born before medicine was a profession.

Dr. Charles H. Richardson, Jr., Macon—I think we must realize that obstetrics is major surgery and is entitled to consideration from that standpoint. A surgeon considers it worth two hundred and fifty dollars to take out an interval appendix, and we only receive from \$12.50 to \$50.00 to carry a woman through nine months and then deliver her, and look after her a week or ten days subsequently.

In regard to blood pressure, we should take the blood pressure in the beginning in order to know what the normal blood pressure is. When the blood pressure reaches 150, that is a danger point. With each succeeding ten points after that I become more alarmed, and when the blood pressure reaches 180 I induce labor. If you do that and watch the case carefully you will not see much eclampsia. The way to cure eclampsia is to prevent it. After it develops, expectant treatment is best. I do not believe in using chloroform and the eclamptic patient should not be subjected to Cesarean section because such patients do not stand major surgery very well.

Another complication in pregnancy is pyelitis. When a pregnant woman has a temperature that jumps up which cannot be explained with a few chills, look out for pyelitis.

When we come to labor and the use of narcosis, I believe that morphin is only indicated in primiparae and only in doses of one-sixth grain. If you give multiparae morphin they may be delivered in two hours and you have to resuscitate the baby. Morphin should not be given in any amount within four hours of delivery. Morphin should be given to primiparae in the first stage, and ether in the second stage. You can drop ether in the second stage for two hours to deaden pain without danger. You cannot do that with chloroform.

In regard to vaginal examinations, just as few of them should be made as possible. I do not think a man should deliver an obstetrical case without rubber gloves. It is safer to make rectal examinations than vaginal examinations. You can diagnose the position of the child in all probability at the first examination, and all you want to know after that as labor advances can be ascertained by a rectal examination. If you practice rectal examinations, you can make them just as well as you can examinations through the vagina, and it is safer for the patient.

In regard to pituitrin, it is a valuable drug, but a dangerous one. I never give any patient more than three minims as an initial dose. I have seen tetanic contractions of the uterus from it, and it should never be used unless the cervix is fully dilated and a small dose given to lift the head off of the perineum.

In regard to the use of forceps, the more we prac-

tice obstetrics the less use we find for forceps. High forceps is a dangerous operation and should be supplanted with Cesarean section or something else. Low forceps is simple and should naturally be used to lift the head off of the perineum. Take off the forceps before you deliver the head and deliver the head with hands.

In regard to the time of delivery of the placenta, I wait twenty minutes in every case unless the woman is bleeding. The placenta will separate in that time and you can remove it by the Crede method.

As to the use of pituitrin and ergot, after labor is the best time to use them, pituitrin following the delivery of the placenta, and ergot as soon as the patient arouses. You contract the uterus and keep it so.

With reference to twilight sleep, too often you deliver a patient and some friend comes in and tells her that some other woman had an easy labor because of twilight sleep. Twilight sleep has been largely a fad and a great many practitioners have tried it. The best obstetricians have tried out twilight sleep and found it wanting. It is a dangerous procedure, particularly for the baby, and it is not advised and not accepted by the best men.

Dr. J. W. Daniel, Savannah—I am afraid I am going to tell you something you will not wish me to refer to, and you may refer me to Dr. Echols when I am through telling you what I have in mind. (Laughter).

As the doctor has said, who preceded me in this discussion, a blood pressure apparatus is the best indicator of what is going to happen to a patient so far as convulsions or eclampsia is concerned. If you watch the blood pressure you are not apt to get into trouble. Watching the blood pressure is not all.

I am going back to the same old story I preached two days previously, and that is the blood chemistry of these cases. This is not original with me, but you will find this in your high blood pressure cases of pregnancy: there is a failure of metabolism in some way; something has gone wrong or you would not have this high blood pressure. It is true, it does not happen in all cases of pregnancy.

Upon examining these women for the cause of high blood pressure we find it is due to chloride retention in a large number of cases. After a while you get a breaking down of the kidney, and you get a lowered threshold for albumin, and the albumin flows over the same as sugar in the diabetic. There is undoubtedly an albumin threshold just as there is a sugar threshold.

Not only in puerperal cases but in your nephritics the nitrogen retention is the thing that gives you the coma and the chlorides cause convulsions. That has been worked out conclusively. I have seen quite a number of coma cases in nephritics so-called, and every one has had a high nitrogen retention. I have also seen quite a number of eclampsia cases and pre-eclamptic cases with high blood pressure and all of them have had chloride retention. With the blood pressure as an indicator put the patient on a chloride-

free diet and you will not get convulsions unless the case is on the verge of a seizure.

With regard to a chloride-free diet, do not say to the patient, "cut out salt," and allow baker's bread, crackers, ham, bacon, sausage, milk, and other things that contain salt. Many doctors will put a nephritic on a milk diet and the patient does not improve on account of the chloride content. If the threshold for chloride is high, and you put the patient on two quarts of milk you give her a considerable amount of chloride.

Dr. J. R. Burdette, Tennille—We fellows who practice medicine in the backwoods run against trouble sometimes. About twenty-six years ago I got a call one night about 11 o'clock to come ten miles to see a primipara. It so happened that she was a prominent individual. I took the history of the case. The patient was one of those small, delicate blondes, and had been in labor about three hours, and thought she was going to be confined right then. I made an examination and found a rigid os. There was only dilatation about the size of a dime. She was making a lot of noise like a screech-owl, sufficient to make the whole neighborhood nervous. I listened to her for a while; I was about ten miles from anywhere, and I could not help remembering a remark made by an old man by the name of Herman of Lincoln County. It was during the latter part of the Civil War and he was at home to attend dedication exercises around Atlanta. He was called in and saw an old man from Raven County. Herman asked the man where he was from, and he replied, "I am from Raven County." "Where are you from?" The reply was, "I am from most anywhere." "The truth of the business was that I am from everywhere right now except right here with this case, and I wish to God I was away from here."

I sat around listening for about an hour and there was absolutely no progress so far as dilation was concerned. The os was rigid. I dilated with fingers. I could not help going back to my old teacher, the lamented William P. Lusk who spent some time at our home. He gave a talk for about fifteen minutes on obstetrical cases and among other things said, do not lose your patience; try not to lose your head, and you will get along when in a tight place. For the rigid os I did not know anything better than atropin to dilate the sphincter. I gave that woman the sixtieth of a grain of atropin and five grains of chloral. I was getting tired because I had done a strenuous day's work. I tried Dr. Curtis' mental suggestion, but it did not seem to work very well in this case. I gave her the sixtieth of a grain of atropin, ten grains of chloral, and ten grains of bromid in ten teaspoonfuls of water. I gave her one teaspoonful of this every thirty minutes, and then I went and laid down, had a good sleep for an hour and a half, and that woman got along as well as anybody you ever saw. I have frequently from that day to this in the case of a rigid os used five grains of chloral and did not have to use an anesthetic. With it you will get a response on part of the rigid os from

the use of atropin if the kidneys warrant the use of it.

Another thing Dr. Lusk said to me was this: there is one thing I want you to remember. Always try and make your patient safe from hemorrhage. Spend at least one hour with your patient after delivery. It is safer to give her some ergot if you know the uterus is clean, and put the weight of your hand on the fundus. It is unnecessary to knead it unless you feel it is relaxed.

Dr. Mixson (closing on his part)—There is one thing I would like to repeat by way of emphasis, and that is, our full duty to the obstetric patient cannot be done in eight or ten days of post partum care. It should be continued for at least four to six weeks until the mother is brought back to as normal a condition as possible.

Dr. Benson (closing on his part)—In regard to the remarks of Dr. Mulherin, I agree with him thoroughly that the pediatrician should come in in dealing with these cases, but he comes in after the delivery. After the baby is born, I want a pediatrician, and I want him badly. I usually tell my patients who is my favorite man, and they can take their choice.

In regard to what was said concerning the use of morphin, I would strongly oppose the use of morphin where it is given within two or three hours of birth. I have had cases where I have had to resuscitate the baby where some one else has given morphin. In Caesarean section morphin should not be given.

In regard to pituitrin, the thing to do in connection with pituitrin is to study the case and thoroughly understand it. There is danger in giving pituitrin if you are not familiar with the pelvic outlet and the condition of the cervix. You are liable to get trouble. I have used it in 1100 cases and have seen no bad effects. By this agent we can shorten labor without harm to the mother or child, and why should it not be used? The only case of rupture of the uterus was one where pituitrin was not given. I have never seen any harm from the use of pituitrin, and I only give it when I know my patients. As I have said, if you do not know the pelvic outlet and the condition of the cervix, the use of pituitrin should be condemned.

Dr. L. A. Baker, Tifton, (closing)—It is said that if all dogs were muzzled we could stamp out hydrophobia. So also, of the knowledge that we have of the spread of malaria, typhoid fever, tuberculosis, and other contagious diseases could be put in operation they also might be stamped out. The matter of prevention of these diseases rests mainly in the hands of the laity. While the prevention of the accidents and morbidity of obstetrics is largely in the hands of the members of the medical profession. This is my reason for making this urgent plea for more conservative practice. We all know enough about the practice of obstetrics, if we would put this knowledge into practice, to avoid a great deal of these accidents and morbidities. I have not told you anything you did not know, but the idea is to urge you to take more time and patience in dealing with this class of work.

Another thing, where there are not more than three or four practitioners in a community I believe that one of them should take up the practice of obstetrics almost exclusively. It is lamentable and deplorable that we have to handle all sorts of infectious diseases, and infected wounds, along at the same time we are called upon to do maternity work. The laity is making this distinction in a good many places. In my town there are about ten doctors, and there the laity use one man for obstetrics, another man for their children, and so on; thus recognizing in themselves that there are differences in the qualifications of the different men for different branches. Where there are that many doctors in one community it is too much lost motion for all of them to be doing everything in the practice of medicine. Of course we all want to do surgery, and none of us can agree to turn this branch entirely over to the other man. Therefore, we are all following each other over the same territory every day. Thus keeping any of us from becoming proficient in any particular line.

As regards ergotol and pituitrin. Pituitrin gives us quick action; we are all aware of that fact. I would not advise the use of ergot and ergotol unadvisedly. You get firmer and more lasting contractions of the uterus from ergot than from pituitrin, I have seen severe hemorrhages due to the action of pituitrin, where you get relaxation following its effects, which effect is shortlived.

As to H. M. C., am afraid of it. I have given but one dose of it since I have been practicing medicine. Fortunately I had no bad results, but I have seen cases in the hands of others in which bad results followed its use. I am afraid of it in obstetrics, or anywhere else.

A CLINICAL STUDY OF PELVIC INFLAMMATION IN WOMEN*

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In this paper I have endeavored to present a brief outline of this extensive subject and to discuss some of the points in the diagnosis and management of pelvic inflammation in women which we have found to be of value in the University Hospital.

Kind of Infection

1. The most important, because they jeopardize the life of the patient, are infections with streptococcus and staphylococcus, introduced during labor, miscarriage, or following instrumentation of the uterus. Puerperal infection with the streptococcus is sometimes of so high grade that the body defenses cannot confine it to the pelvis: the patient quickly dies from disseminated in-

fection and toxemia. However, in most of these cases the lesion is limited to the tubes, ovaries, and pelvic peritoneum.

2. The large majority of pelvic inflammations are due to the gonococcus, either alone or in company with one of the pus-producers. While gonococcus infection of the tubes and ovaries is responsible for the greatest amount of chronic invalidism in women, it is seldom in itself a cause of death.

Septic Salpingitis

It is nearly always possible to obtain a history of miscarriage or instrumentation. The pelvic examination will often confirm this, or establish the fact in the absence of history. Conversely, it is of the greatest value in deciding what to do to be able to eliminate the puerperal state, or instrumentation. Practically this will rule out the streptococcus.

Time varies from immediate infection with symptoms, to symptoms delayed some days or weeks. Ordinarily the septic state is in close enough sequence to labor or miscarriage to make its identification easy; and by the same token we may take the time that has lapsed before the appearance of symptoms as a rough index to the virulence and activity of the organism. Also, when we consider that septic salpingitis in its various phases may give trouble for from several days to a year or more after labor or miscarriage, it will appear that exact diagnosis may be difficult, and that the lesion will vary greatly.

Puerperal infection with high-grade streptococcus develops symptoms suddenly after labor. There has been no previous pelvic invalidism. The organism rapidly finds its way to the tubes and peritoneum by direct mucous membrane extension, and this type does not cause early closure of the abdominal ostium. The uterus is an abdominal organ at this time, and the septic material escapes from the tubes to peritoneal surfaces in the general cavity. The patient dies with only very little slimy exudate in the tubes and no exudate on the peritoneal surfaces about them. (Berkely and Bonney refer to this as "passive peritoneal intoxication") I.

Septic salpingitis developing a few days

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after labor hardly admits of any other treatment than immediate abdominal section for removal of the infected appendages and the establishment of drainage. Even this at times is of little avail, but to delay is fatal.

SEPTIC PYOSALPINX is more likely to occur after early abortion. The uterus is in the pelvis, the vascular development is not yet such as to favor rapid dissemination, the organism may in the beginning be of low grade, or the defense reaction may confine its activities to the pelvis. The end of the tube becomes sealed over, or the extremity becomes stuck to its ovary. A lateral mass develops, which is a tube-sac filled with pus, and stuck to an edematous ovary; an inflamed tube coiled around an ovarian abscess; or the not uncommon tubo-ovarian abscess. The mass is lateral, or postero-lateral to the uterus, often unilateral, and over all is a matting together of omentum and intestine which greatly exaggerates the size of the true lesion. This inflammatory tumor often mounts up more than half way to the umbilicus. It must also be remembered that a high position of the abscess sac occurs in further advanced or full-term pregnancies due to the establishment of adhesions while the uterus is enlarged.

Case 1. Abstracts of illustrative cases: Mrs. B. S., University Hosp., No. 29286. Age 18. Full-term living child 6 wks. ago. Previous health good, pelvic included. Very ill on admission with temp. 101, pulse 130, R. 30, leucocytosis 20,600, haem. 40 per cent. Blood culture negative. A large oblong mass filled right pelvis and extended upward in right abdomen almost to hypochondrium. This rapidly developed 3 wks. ago with great pain. The patient shows extreme pallor. She was carefully watched in the hospital for 3 wks. forcing fluids, ice bag continuously, and with attention to elimination. During this time she improved a little and the mass lost some of its tenderness. The temperature remained elevated between 101 and 103, with feeble pulse. The leucocyte count fell to 15,280, there was no area of softening either in abdominal or vaginal surface of the mass, and her condition had stabilized with a tendency to deteriorate.

Operation, 3-17-23. Drainage of large rt. ovarian abscess through lower mid-line incision. The abscess lay under the rt. broad ligament with a thin tube stretched over its anterior surface. The abscess was making an effort to point through ant. abd. wall near ant. sup. spine. A secure wall of recent formation closed off the process from the general cavity. Drainage was quickly done and patient removed in poor condition with pulse 170. She reacted well, there was free drainage for several days, and then it rapidly diminished. She

was discharged well in 2 wks. The culture from the pus was neg. and films showed no bacteria. (This case will probably require a late operation.)

Case 2. J. R., University Hosp. No. 28302. Age 30. Previous health good. Full-term child 9 wks. ago, midwife attending. No post-partum bleeding. A physician is said to have removed pieces of placenta 4 days after labor. Semicomatose 3 wks. following, with chills, fever and occasional vomiting to date.

Operation: Left salpingo-oophorectomy. Liberation of extensive fibrous adhesions binding large ovarian abscess-sac under left broad ligament and to rectum. Omentum adherent to anterior surface of all this mass. Bacteriologist's report: Culture, streptococcus.

Pathologist's report: "Old suppurative salpingitis, left. Parametritis. Massive organized exudate. Ovarian abscess, apparently of corpus luteum origin: although no yellow pigment is seen below the granulating surface, there is much dense fibrous tissue with the characteristic arrangement of that destined to fill up a ruptured follicle. R. V. Lamar, Pathologist.

This patient was very ill on admission with temp. between 99.6 and 100.4. Pulse 88 to 120, Resp. 24. Leucocyte count 9,640. Severe pain in lower abdomen. Pelvis filled with inflammatory mass extending to navel, with great tenderness. Admitted 12-4-22. Discharged 1-6-23. Recovery.

Comment: Both of these cases had taken care of their infections fairly well, although both were full-term labors. In the first, symptoms were delayed three weeks, while the second developed symptoms immediately.

(In our experience ovarian abscess is practically always a corpus-luteum abscess. The large succulent corpus-luteum lies, filled with blood, directly under the surface of the ovary, or standing prominently above it, with a plug of clotted blood filling the breach in the germinal epithelium caused by the passage of the ovum. Infection seems to occur by direct inoculation from the overflowing tube exudate, though that this is not the only mode is referred to elsewhere in this paper when colon bacillus infection of the corpus-luteum occurs from adherent intestine or appendix. A corpus luteum abscess may be identified at once by its corrugated yellowish rind external to the pyogenic membrane. If the pigment has faded in older cases, the microscopic section will show vestiges of pigment, and the unmistakable wavy hyaline external tunic. We have noted how exceptional is the condition of infected follicular cyst, multiple miliary abscesses, etc., in the study of surgical pathological specimens.)

Finding, then, a tender unilateral mass in the fornix or cul-de-sac of a patient acutely ill with temperature and leucocytosis, who had good health until recent abortion, speaks for streptococcus or staphylococcus salpingitis or ovarian abscess. It is often possible to grow these organisms by inoculating a tube of Loeffler's medium with pus from the tube or ovary at operation. It is a comfort to find that the exudate is sterile, or at most contains inactive organisms. It is folly to assume that these exudates are all sterile. It has been shown that the streptococcus may

remain active in fibrous sequestration in these lesions for one or two years. 2.

Another point of practical importance in recognizing the type of somewhat older infections, is the character of the adhesions. Curtis has discussed this in a bacteriological study of salpingitis. 3.

The streptococcus and staphylococcus give rise to an exudate rich in fibrin resulting in fibrous adhesions which require cutting. The gonococcus excites very little fibrin-formation: consequently the peritoneal adhesions of tube to surrounding structures are moist and readily separated.

A third type of streptococcus pelvic infection is lymphangitis or cellulitis of the broad ligament. Bi-manual palpation reveals an exquisitely tender induration extending from the cervix to the pelvic wall. While the cellular exudate may be so brawny as to be easily recognized, it may be less in amount in older cases, and I have found that gently moving the cervix to right or left, thereby stretching the infiltrated area will reveal it by pain. As opposed to pyosalpinx or tubo-ovarian abscess, broad ligament lymphangitis will generally be found as an induration low down, and extending from the cervix laterally to the pelvic wall. This will often terminate in abscess.

Bourne (4) has called attention to a form of cellulitis in late cases which spreads forward from the meso-salpinx to involve the upper part of the broad ligament beneath the round ligament. We have noted, with him, early adhesive obliteration of the cul-de-sac so that a pelvic exudate will depart from its usual custom of pointing in the vagina, running forward instead, sometimes by way of infundibulo-pelvic ligament, dissecting up the parietal abdominal peritoneum, and working anteriorly toward Retzius' space, or pointing through the abdominal wall near the anterior superior spine.

If the general condition shows a tendency to remain at a standstill, or improve, one should wait for the process to become encapsulated, meanwhile using eliminative treatment, abundance of water and the ice-bag. Waiting will often be rewarded by resolution of the exudate in cases of pelvic cellulitis and perimetritis. This attitude in

management will apply to septic pyosalpinx and ovarian abscess as well, and while the encysted exudate will not change much in physical properties, the causative organism will soon suffer attenuation and become inert. Nothing will grow out on the inoculated medium, and yet film preparations of the pus will show myriads of bacteria. Emaciation and exhaustion supervene rapidly in these patients and we must not let this go too far in waiting. Vaginal drainage of the parametrial abscess must be done as soon as possible, with an abdominal section later on. The case must be frequently examined to anticipate softening and rupture into a viscus. Neglected cases show rupture into rectum and bladder. We must be on guard for the moment when effort at resolution has accomplished as much as possible.

Gonococcus Salpingitis

The lesions are characteristic. We believe mixed infection to be quite frequent, and this leads to atypical lesions. Early closure of the extremity is the rule. The fimbriae become turgid, agglutinated, and curl inward to disappear within the sphincter-like abdominal ostium. If the tube is not neatly rounded off, it is usually adherent to its ovary, the fimbriae, as it were, being stuck to the ovary in the act of grasping it. Enlargement of the tube is produced by thickening of its walls with or without visible exudate in the lumen. The gross exudate is nearly always in the distal half. Curtis found that patients free from fever 10 to 14 days almost never have living gonococci in their tubes, and regards exacerbations as re-infections coming up from the endo-cervix, Bartholin's and Skene's glands, etc. As most cases date their illness or relapse from a menstrual period, this seems to support his view, as well as to explain the mechanism of mixed infection. I believe the uterine end of the tube remains open more often than we have been taught in the past. The staphylococcus is shown to be a fairly constant inhabitant of the diseased endo-cervix, and we may not be far wrong in assuming that it enters the tube through a patent uterine end during menstrual con-

gestion. The staphylococcus may be grown from the exudate of a characteristic pustule which now contains no gonococci. We have confirmed by our own studies the occurrence of colon bacillus invasion in these diseased tubes and ovaries where intestinal adhesion to the abscess was present.

Abstract of cases illustrating mixed infection:

Case 3. M. T. University Hosp. No. 28,450, 12-23-22. Age 36. Two pregnancies went to term. Pain began 4 wks. ago in lower abdomen, and became severe 2 wks. ago.

Admitted with tender lower abdomen and fixed bi-lateral pelvic masses. T. 99, P. 80, R. 24. White cell count 5,800. Haem. 80. Path. Report: "Remains of double suppurative salpingitis. Organized exudate, more on rt. side. Large corpus luteum cyst of rt. ovary. Multiple (small) fibromyomata of uterus." R. V. Lamar, Pathologist.

Note: The right tube contained living, but rather inactive staphylococci. Operation: Sub-total hysterectomy. Recovery.

Case 4. T. M. University Hosp. No. 28035. 11-11-22. Age 36. Admitted with attack of severe lower abdominal pain which began 8 days ago, most severe on rt. side. T. 98, P. 80, R. 20. Leucocytosis, 24,800. Severe anaemia. Eight years ago she had an operation for salpingitis and the rt. tube was removed. Since then attacks of pelvic pain have come at intervals of 1-2 months lasting 1 to 5 wks. with fever. Menorrhagia 3 to 15 days for past 8 yrs. No pregnancies.

At operation the rt. ovary formed an abscess size of large orange. The appendix was long, inflamed and attached to this sac. The abscess was brought up with difficulty and ruptured early in the attempt. The left tube contained pus and was adherent to a cystic ovary. The remainder of the operation (left salpingo-oophorectomy, rt. oophorectomy, appendectomy) was completed in the ordinary way with drainage.

Path. Report: Loeffler's medium inoculated with pus from ovarian abscess showed staphylococci.

Condition serious 3 days, abundant sanguino-purulent drainage with fecal odor for 10 days. Discharged with wound healed 6 weeks later.

Case five. M. J. University Hosp. No. 28,427. Admit 12-14-22. Age thirty. One child, no other pregnancies. Pain began in rt. lower quadrant four years ago, lasting two days. Recurrence of attacks at intervals of one week to two months. Recently attacks came weekly and with more severe pain all over lower abdomen. Since beginning of pelvic trouble menstruation has varied greatly in time and amount of flow.

Sub-total hysterectomy was done because extensive adhesions were so fibrous that the adnexa could not be separated and respected alone. Drainage. Path. Report: "Old suppurative salpingitis, left; much organized exudate; old abscess left ovary." R. V. Lamar, Pathologist."

This suppurative salpingitis showed mixed infection with staphylococcus, streptococcus and colon bacillus: the predominating organism was the staphylococcus.

Leucocyte count prior to operation was 6200. Hem. 70. Temperature was maintained during the period of observation and preparation at 99 to 100. Recovery.

Mixed infection in gonococcus salpingitis

may be demonstrated bacteriologically as responsible for elevated temperature maintained over weeks of preparation. The simple gonorrheal tube will probably contain sterile pus when the patient is ready for operation, and if the peritoneum be soiled by its rupture no harm will come. This kind of a tube will often lie free in the pelvis, even if adhesions are present they will be moist and will give way readily before the exploring finger.

A mixed infection, suggested by the temperature chart, by tough adhesions, by malodorous pus, will require drainage of short duration, say 48 hours, when the drain may be removed. Twenty-four hours culture, and the films made at operation will advise us as to the infection. An ovarian abscess will usually be found lying under the broad ligament which is spread over at least two-thirds or more of its circumference. The upper border of the ligament containing the flattened tube can usually be seen on its interior surface. The natural tendency is for the heavy and inflamed tube-ovary mass to fall backward into the cul-de-sac; but it is urged to take this position partly by the thickening and shrinkage of the broad ligament. An abscess sac frequently lies on the surface of an edematous ovary between the tubal ostium and a coil of adherent intestine, as in one of our recent cases. (Miss P. C. University Hosp. No. 29,711).

These exudates form velumetitious adhesions and sometimes leave loculated serous accumulations in the neighborhood of the tube.

Case 6. M. G. University Hosp. No. 28,625. 1-12-23. Chronic bi-lateral salpingitis with an encapsulated straw colored serous exudate between right tube, ovary and posterior surface of the broad ligament.

The important question of conservation will always be difficult to settle. Dangerous pathology in the ovary will sometimes be less obvious than disease of the tube. As noted above, puerperal septic infections are usually unilateral. Even in the presence of gross disease on one side, the opposite tube and ovary are sound. If the opposite tube is soft and patent it should by all means be conserved, and there is little danger of its ovary being diseased. But an ovary that has

to be dissected away from a gonococcus pyosalpinx is almost certain to be infected and dangerous, and if left will require later operation for abscess or cystic disease.

Summary

1. Virulent septic infections developing immediately after full-term labor or miscarriage during the latter months will rapidly generalize and end fatally. There will be little local reaction to the infection.

2. A few cases showing some resistance will be saved by prompt reaction of the inflamed appendages.

3. Infection after abortion must be carefully waited upon to localize. The time to operate will come when the patient's general condition is stabilized, with temperature always above normal, and with a tendency for the general condition to deteriorate.

4. As a corollary to No. 3 one should wait in more favorable cases which have localized, and which show a tendency to improve with resolution of the exudate, until the temperature has been normal three or four weeks, or longer.

5. Complete resolution occurs in many septic cases.

6. Blood cultures should be made in septic cases, and cultures and films of the exudates should be made in all cases.

7. Gonococcus salpingitis must be given full time to abate before operation.

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DISCUSSION ON THE PAPER OF DR. E. A.

WILCOX

Dr. J. M. Anderson, Columbus.—For a great many years I have been compelled to do general practice because I thought that was the best policy, and I am not saying this against my friends, the specialists. But in doing general practice we are compelled to do some obstetrics and some gynecology. I am going to try to give to you what I have to say in a nutshell.

Many years ago I noticed that practitioners, in trying to make applications to the uterine cavity with iodine would put the iodine on a piece of cotton or gauze on a dressing forceps and introduce the iodine into the uterine cavity, all the iodine being squeezed out of the cotton in passing

through os uteri. So I finally set my mental faculties at work and determined that the only way to do that was to use a long nozzle glass syringe. If you use a metal syringe, the iodine will corrode the metal, make the piston loose, and you will not get the iodine in the uterine cavity. You use a glass Luer syringe with long metal nozzle as you do in deep urethral work. You also put iodine in a syringe and introduce it into the uterine cavity as a matter of prophylaxis, just as you use nitrate of silver in a baby's eyes to prevent disease. If you do that in all cases you will eliminate the vast majority of obstetrical and gynecological troubles.

Dr. E. C. Davis, Atlanta.—I do not like to allow such an excellent paper as this to pass without having more comment made on it, and I want to not only commend but endorse practically everything that has been said. I would especially emphasize the fact in these cases of acute infection the wisdom of waiting until there is a localization of the infection before proceeding with a radical operative procedure. I have felt for many years that was the safest procedure for the benefit of the patient and her recovery. Some of our more radical friends disagree with that statement, but from the experiences we have had, the attenuation of the poison, the increased resistance, and destruction oftentimes of the active organisms, as the essayist has said, have conduced to the recovery of the patient and her subsequent relief. I think sometimes we get these conditions too early. I have made it my practice, where we have these patients in the wards of the hospital during the acute condition, to adopt the plan recommended and then send them back home, and let them stay for six weeks or two months, and then return for more radical operative procedure. In this way the mortality has been reduced to a decided minimum and the patients were generally restored. It takes radical methods in many of these cases to get rid of the entire focus of infection, and it is well, if possible, to rid the woman of discomfort and not make an invalid of her. We know that the gonococcus leads to permanent invalidism, and many women drag out such a miserable existence through morbidity that death itself would be a relief, thus sparing them much discomfort and suffering.

Dr. B. H. Wagnon, Atlanta.—This question, like regional anesthesia, comes close to our hearts. It is a question to which I have given considerable study in recent years, and I have tried to determine which was the exact procedure to follow in these cases.

I have found that a true streptococcus infection after it is once established is nothing more than a true septicaemia. It becomes a systemic condition of constitutional origin, and one that has to be treated more by supportive measures than by operation. Tubercular conditions as we find them the doctor did not mention, and I will not refer to them, although we have some authors who state that 3 per cent. of inflammation of the tubes is

tubercular, but by far the largest number of pelvic inflammations come from gonorrheal infection. Fully 70 to 75 per cent. of the pelvic operations for ovarian abscesses and pus tubes are the result of Neisserian infection, coupled with the staphylococcus or colon bacillus or other mixed infections.

In dealing with these cases you know that if we take a true Neisserian infection we would have inflammation of the tube, and you can demonstrate the gonococcus from the glands in the cervix, but in the uterus proper you very rarely ever find the body of the uterus infected. You can hardly grow the gonococcus from the body of the uterus; but if you take those tubes where you have waited until the gonorrheal infection has become practically a hydrosalpinx, if that gonorrheal infection is left long enough the tube becomes a hydrosalpinx, and the pus will disappear in it, but not so if there is mixed infection. Taking the whole tube with the pus in it and plant it on hydrocele fluid, in 60 per cent. of the cases you may grow the gonococcus. I have been doing a little work for the past year in a large series of cases in regard to the removal of sub-acute pus tubes and acute tubes. I have removed a great many of them and the work has been entirely satisfactory. I know it does not meet with the approval of the profession and the doctors at large. I have started this work with trepidation and am scared to say anything about it to Dr. Davis, Dr. Goldsmith, and Dr. Persons because I am so radical about it. I have operated on tubo-ovarian abscesses and acute tubes, being careful not to soil the peritoneum, and taking good care of the wound. I have not seen the wisdom of putting in a rubber tube down into the pelvis to drain something you have taken out so long as the patient by diet and other measures got well just as an acute appendix case.

Pelvic inflammation brings up the time-worn subject of radical versus conservative surgery. Well, that resolves itself usually into the technic of the surgeon who is doing the work. Conservative surgery does not always mean leaving organs. Every organ, especially the female organs of a woman, that can possibly be left should not be removed. Conservative surgery does not mean leaving a diseased organ; it means you have to do a second operation. Dr. Davis has told us that he sends these patients back to their homes after the acute stage has subsided, and tells them to come back and be operated on later. Every patient I have sent home and instructed to come back to be operated on later has been operated on by somebody else. (Laughter.)

Dr. Charles H. Richardson, Jr., Macon.—Pelvic infection is due largely to two types of organisms: the streptococcus and gonococcus.

Part of this subject that has not been gone into

and which I think is very important is the prevention of pelvic inflammation, with reference to streptococcus infections that are practically due entirely to conditions following labor and abortion. No man should make a pelvic examination in labor without rubber gloves that are boiled or sterilized, and repeated examinations should not be made unnecessarily. It is really better to make rectal examinations after the first examination; then after labor occurs and the patient probably has a little retained membrane, it is much better to wait unless the patient is bleeding profusely than to do any intrauterine meddling. We must get away from intrauterine douches following labor and intrauterine curettage because something has been left in the uterus. It can do nothing except spread the infection and is a very hazardous procedure.

When we come to the gonococcus type of infection, gonorrhea in the female does not receive as much attention as it should. We must look for it oftener and diagnose it early, and do nothing to carry the infection beyond the labia, if possible, in the early stage. When infection has become established in Skene's ducts in the urethra and Bartholin's glands and in the cervix, we must eradicate the foci of infection by local applications to the cervix and to the ducts in order to prevent the infection from becoming so firmly established that the patient afterward develops pelvic cellulitis. After all, the prevention of pelvic infection is the most important thing.

Dr. Wilcox (closing): The point I wish to emphasize particularly is that in all these pelvic infections we must do all we can to tide the patient over the acute stage, and support her defense reaction until the organisms have become inactive. By so doing we will prevent spreading the infection, the recurrence of inflammation, diminish post-operative adhesions, and provide for prompt convalescence. Our results will be directly proportionate to the care exercised in the preparation.

I do not think that operation during the acute stage of gonorrheal salpingitis is justifiable. It is not likely that one could define the limits of an acute inflammation; and under these circumstances too much or too little will be done. As I have indicated, even operation in the acute exacerbation of chronic disease should be deferred unless dangerous abscess threatens.

Some tubes may undergo spontaneous healing. If it is true, and it seems to be from the evidence presented, that acute tubal exacerbations are due to a new infection ascending from lower tract lesions, endocervix, urethra, etc., we should carefully treat the external disease during the period of preparation. This will render reinfection less likely, and will certainly place the patient in more suitable condition for the final operation.

A CASE OF PRIMARY CARCINOMA OF THE LUNG.

Spencer A. Folsom, M.D.

Atlanta, Ga.

An elderly American, aged 59, entered the hospital May 23, 1922.

Chief Complaint: Hoarseness, cough and dyspnea.

Occupation: Merchant. Works indoors 10 hours a day. Good ventilation and general environment.

Family History: The only thing of importance in the family history was the history of two miscarriages by his second wife.

Habits: Coffee one to two cups a day. Drank whiskey for about 10 or 12 years, not to excess but moderately. Ceased drinking about 7 or 8 years ago. Has used tobacco constantly since the age of twenty in the form of the pipe and chewing tobacco. No tea, drugs or venery.

Past History: Measles and whooping cough in childhood—age unknown, no complications. Typhoid at the age of 18 years, in bed 40 days, no complications. No chorea, diphtheria, chicken-pox, scarlet fever, pleuritis, pneumonia, malaria, tonsillitis, acute rheumatic fever, syphilis, gonorrhea, influenza or mumps.

Injuries: None.

Operations: None.

Present History: Patient first noticed that he became hoarse in the first part of December, 1921. This continued, progressively growing worse until the last of December, 1921, when there became associated with it a dry, hacking, unproductive, paroxysmal cough worse at night. In about three weeks, after a strenuous effort, he would succeed in expectorating a tenacious, mucoid sputum occasionally flecked with blood. Has been suffering with nausea for the last two months which has not been related to meals or coughing. Pain in the left chest near the nipple began about three to four weeks ago. This pain is of a boring character, is consistent, does not radiate and is made worse by the paroxysms of coughing. Best weight prior to December, 1921, was two hundred pounds. Has lost seventy pounds since that time.

Gastro-intestinal Tract and Associated Glandular Structures: Appetite poor. Nausea

as noted above with vomiting at infrequent intervals, no relation to meals or coughing. Bowels costive, usually takes purgatives.

Pulmonary: Hoarseness, cough, sputum, pain in the chest and loss of weight as noted above. No chills, fever or sweats.

Circulatory: Dyspnea on slight exertion since the latter part of December 1921. Orthopnea has existed since the middle of April 1922. No oedema. No anginoid pains. No palpitation.

Genito-urinary: Negative except for nocturia 1 to 3 at night.

Joints: Negative.

Physical Examination.

The patient is an individual of poor muscular development and in a state of very bad nutrition. Poor mental condition, assumes the dorsal position in bed, is dyspneic, coughing constantly and evidently in great respiratory distress.

Skull: Negative.

Scalp: Negative.

Hair: Snow white, of a fine texture and sparse over the forehead and temples.

Face: Reveals the marks of emaciation. There is marked inophthalmos, prominent cheek bones over which the dry, seamed skin is loosely folded.

Skin: The skin shows pallor and is dry and fine. It is cool and shows a marked loss of turgor. No eruptions or pigment.

Eyes: The pupils are a light pink—those of an albino. Regular, in midsight and react to light and distance. Sclerae are clear. No photophobia, lachrymation, diplopia, nystagmus, strabismus, palsies or lid-lag. Inophthalmos as noted.

Ophthalmoscopic Examination: O. D. Media clear, disc margins obliterated. Arteries tortuous and sclerotic with distended veins. Retina a pale pink and very thin, so much so in fact, that the choroidal vessels are plainly seen. No hemorrhages.

O. S. The same findings.

Conclusions: Albinotic Fundus.

Arteriosclerosis.

Optic Neuritis.

Conjunctivae are very pale-anemic.

Ears: Negative.

Nose: Negative.

Mouth: Foul breath, otherwise negative.

Lips: Pale in color, otherwise negative.

Teeth: Normal formation and position.

Many cavities, many missing.

Gums: Pale. Pyorrhea alveolaris present.

Tongue: Slight grey coat, protrudes in the mid-line, slight tremor.

Tonsils: Atrophied.

Pharynx: Pale in color, otherwise negative.

Larynx: Voice is hoarse. No laryngoscopic examination made.

Neck: Negative.

Thorax:

(a) Inspection: Chest is generally larger than normal, barrel-shaped with evident bulging of right side. Poor nutrition. Respiratory movements limited on the right side. Diaphragm excursion fixed on the right side.

(b) Palpation: Apex beat displaced to the left, in the fifth interspace, mid-axillary line. Force of the beat weak and diffuse 7 cm. along the interspace. No thrill. Tactile fremitus absent over the right side except the apex anteriorly and posteriorly.

(c) Percussion: Dullness over the entire right side except the apex anteriorly and posteriorly. The dullness, however, does not extend beyond the sternum anteriorly or beyond the vertebral column posteriorly. The right border of cardiac dullness cannot be determined, the left border is found in the mid-axillary line.

(d) Auscultation: Vocal fremitus absent over the area of dullness as noted above. Absent voice sounds over the same area. No rales.

Vessels: Vessel walls sclerotic. Radial pulses 102, good rhythm, equal, fair volume.

Abdomen: Poor development, scaphoid in type. No pulsations, tenderness, masses, spasm, fluid or demonstrable herniae. Reflexes normal.

(a) Liver: Three fingers breadth below the costal margin, surface and edge smooth and regular.

(b) Ball-bladder: Negative.

(c) Spleen: Negative.

(d) Kidneys: Negative.

(e) Genitalia: Negative.

Rectal Examination: Prostate moderately enlarged, firm consistency but not hard, lobes equal in size, no nodules, symmetrical.

Lymph Nodes: Negative.

Bones: Negative.

Extremities: Reflexes normal.

Skin: Negative.

Laboratory Notes:

5-24-22. Leucocytes: 18,400. Hem. Est. (Sahli) 74%.

Erythrocytes: 3,250,00.

Differential Count:

Polymorphonucleus 87%.

Small Lymphocytes 6%.

Large Lymphocytes 5%.

Transitionals 3%.

5-25-22. Blood Wassermann: Two plus.

5-27-22. Sputum: Staphylococci, occasional pneumococcus, pus cells and mucous. No elastic fibers. Culture negative.

5-27-22. Pleural Fluid: Bloody in the gross. Culture negative. Smear showed red blood cells and pus cells.

5-28-22. Sputum: Negative for T. B. (Antiformin Method.)

5-29-22. Sputum: Negative for T. B. (Antiformin Method.)

5-30-22. Sputum: Negative for T. B. (Antiformin Method.)

5-31-22. Sputum: Negative for T. B. (Antiformin Method.)

5-31-22. Blood Wassermann: Negative.

6-1-22. Leucocytes: 18,400.

Differential Count:

Polymorphonuclears 79%

Small Lymphocytes 15%

Large Lymphocytes 4%

Transitionals 1%

Basophiles 1%

Urinalysis: Spec. Grav. I. 020, total acidity 40 degrees, albumen two plus, many hyaline and fine granular casts. Small amount of pus, occasional red blood cell and few epithelial cells.

Feces: Smear showed colon bacilli, staphylococci and a diplococcus. Few pus cells.

Roentgenological Examinations: First examination (842). Complete clouding entire right side of chest, obliteration of diaphragm outline. Heart pushed far to the left. Interpretation: Pleurisy with Effusion or Empyema Right Side of Chest.

Second examination (842). (After removal of 1150 cc. of fluid from the chest.) Opaque density in the right side of chest considerably

reduced in the lower. Clouding is still present throughout the remainder of the chest.

Third examination (875). (After removal of 3,590 cc. of fluid from the chest.) There is considerable opacity in the right side of the chest, especially marked around the third rib. No definite mediastinal growth can be outlined. Heart shadow enlarged.

Fourth examination (899). (For the detection of metastases from a primary carcinoma of the lung—Ewing.) No evidence of metastases can be found in the skull, ribs, sternum or spine. There is seen a fusion of the ninth and tenth dorsal vertebrae which suggests an old healed tuberculosis lesion.

Diagnosis: Primary Carcinoma of the Right Lung. (Upper Lobe).

Clinical Course: During the patients stay in the hospital the temperature and pulse showed very sudden and decided daily variations, the former being typically intermittent in character.

The temperature usually varied from 97.0-F to 101.8-F until the seventh day after admittance when it dropped to the low point of 96.0 F, after which it hovered between 97.0 F and 99.1 F. up to the day of his death.

The pulse ranged from 88 to 118, was of fair quality and showed no arrhythmia.

Six aspirations were done and a total of 4790 cc. of bloody fluid removed from the right chest.

At all times during the course of the illness numerous notations attest to the fact that he suffered from cough, dyspnea, orthopnea, nausea, nervousness and insomnia progressively growing weaker and weaker.

In reaching a diagnosis the following formulae were used and elimination practiced.

Causes of Bloody Pleural Fluid:

- (1) Previous Trauma.
- (2) Malignancy.*
- (3) Tuberculosis.

Causes of Hoarseness and Aphonia:

- (1) Laryngitis.
- (2) Tuberculosis.
- (3) Neoplasm of Larynx and Cords.
- (4) Aneurysm.
- (5) Hysteric Aphonia.
- (6) Mitral Stenosis.
- (7) Syphilis.
- (8) Irritants.
- (9) Tumours of the Mediastinum.

(10) Pressure on Mediastinal Structures.*
Dyspnea:

- (1) Cardiac Disease.
- (2) Phthisis.
- (3) Pneumonia.
- (4) Anemic or debilitated individuals.
- (5) Miliary Tuberculosis.
- (6) Increased intrathoracic pressure due to mediastinal tumors, to aneurysm and occasionally to pericardial effusion.*
- (7) High diaphragm pushed up.
- (8) Sepsis.

Aids which assisted in the diagnosis were:

- (1) The age, 59 years.
- (2) The pressure symptoms----hoarseness, cough, dyspnea and orthopnea.
- (3) The negative history of trauma.
- (4) The course of the temperature and pulse.
- (5) The laboratory findings.
- (6) The progressive weakness and rapid downward course.

(7) The rapid loss of weight, 70 pounds in 5 mos.

(8) The physical signs of massive fluid in the right chest.

(9) The radiograms confirming the above.

(10) The removal of large amounts of bloody fluid which reformed rapidly.

Necropsy. Dr. A. J. Ayers. June 4, 1922.

The body of an adult male 71 inches in height, weight 130 pounds. The body surface showed marked pallor with evidences of extreme loss of weight. Some deformity of the right side evidenced by extreme fulness and bulging of the interspaces. Patient admitted to the hospital, medical service, May 23, 1922, with symptoms of dyspnea and cough, continued to grow weaker and ceased on the fourth of June, 1922.

Abdomen: The abdominal wall was about the normal thickness and showed no pathologic changes. The peritoneal cavity was free of blood or fluid in abnormal amounts. The peritoneum and the omentum were normal. The stomach and intestines were in the normal position and showed no changes. The spleen was larger than normal and showed some parenchymatous changes. The liver was moderately enlarged and about the normal consistency. On section nothing of interest

*For the above information, I am indebted to the monumental work of Ewing on the Neo-plastic Diseases.

was found. The kidneys were of the normal size and consistency. On section the capsule retracted and was removed without difficulty. The cortex and the medullary areas were of the normal thickness. Some of the retroperitoneal glands were enlarged but no evidences of new growth. The prostrate gland was normal. The bladder was also negative.

Thorax: On opening the thorax there was a gush of bloody fluid from the right side which did not contain any clots. 3000 cc. of this fluid was removed from the right chest. The lung was contracted down into a small mass which hugged the lateral aspect of the vertebral column. The lung was not adherent to any of the surrounding structures, was small and on its surface could be seen a number of greyish-white areas ranging in size from that of a millet seed to that of a small bean. Some of these areas were elevated above the surface but the great majority of them were to be seen below it. The lung was extremely firm and on palpation small nodules, like marbles, could be felt to roll between the fingers. On section the upper right lobe showed a large number of small greyish-white and white growths some the size of a pin head and some the size of a dime. A small number of these growths were also scattered throughout the right middle and lower lobes. None of the growths showed necrosis. There was marked thickening about the hilus and the larger bronchi. The left chest was free of fluid and adhesions between it and the lung. On inspection both lobes appeared to be normal but on section a few small growths were found scattered throughout both lobes. On section they had the same appearance as those in the right lung. The pericardial cavity contained an abnormal amount of bloody fluid. There was no evidence of pericarditis. The heart was of the normal size and the myocardium was normal. The aortic valve showed a number of small vegetations which were difficult to remove. A few vegetations were also seen on the mitral valve. The other valves were normal. None of the valves showed any thickening which one would expect in such a chronic condition. The lymph glands about the chest cavity were all enlarged, firm and on section had the same appearance as the growths in the right lung.

Pathological Diagnosis:

Primary Carcinoma of the Right Lung, upper lobe, with Metastases to the Left Lung and Bronchial Lymph Glands. Chronic Valvular Vegetative Endocarditis.

Histological Examination

Dr. A. J. Ayers.

Right Lung: Stained sections demonstrated the growths to be that of medullary carcinoma and extensively distributed throughout the lung tissue. The carcinomatous areas showed very little connective tissue framework. At those points where the carcinomatous growths had invaded the pulmonic tissue very little of the latter was left, and surrounding the growths there was evidence of intense inflammation, that is, excessive exudate where polymorphonuclear leucocytes and small lymphocytes predominated.

Left Lung: The same type of carcinoma, less extensively distributed, was also found surrounded by inflamed pneumonic areas.

Liver: The liver cells showed some central necrosis of a granular degeneration type. No evidence of malignant growth. Kidneys: The kidneys showed some increase in connective tissue in the cortices, a chronic parenchymatous nephritis not marked.

Pancreas: Normal.

Prostate: Some increase in connective tissue, a chronic prostatitis. No evidence of malignant growth.

Histo-Pathologic Diagnosis:

Primary medullary carcinoma of the upper lobe of the right lung, with metastases to the upper and lower lobes of the left lung.

In 1810 Bayle indefinitely described pulmonary carcinoma, while Stokes, 1842, recognized several varieties of the disease. It is, however, since the studies of Wolfe, 1895, and Passler, 1896, that the more detailed knowledge has existed and the literature has grown to quite formidable proportions. Adler, 1911, collected 374 cases of carcinoma and 90 of sarcoma. Since that time up to 1922 Scott and Forman have found reports of 120 new cases, the number of cases on record to date totals 605.

Primary malignant tumors of the lungs

form about one per cent of all cancers.

Males are more frequently affected than females, 71.9 per cent to 24.8 per cent.

The chief factor in the production of malignancy of the lung is tuberculosis.

Trauma has been recorded in many histories of primary malignancy of the lung.

According to the origin three groups of pulmonary carcinoma are considered, as rising from.

(a) bronchial epithelium, (b) bronchial mucous glands, (c) alveolar epithelium.

ACUTE HEMATOGENOUS PYELO- NEPHRITIS*

Report of Case in Infant Three and One-half Months of Age . Operation. Recovery.

Charles H. Watt, M.D., F.A.C.S.
Thomasville, Ga.

In the recent work published by Kelly and Burnham on "Diseases of the Kidney, Ureter and Bladder," in speaking of Acute Hematogenous Pyelonephritis these authors frankly admit that the treatment of this disease is still a matter of dispute when they say "this subject deserves more study and careful recording of cases." Herein lies my excuse for appearing before you today.

Before presenting the history of this case to you I should like to take a few minutes of your time with a hasty review of some of the recent work on the Acute Hematogenous Infections of the Kidney to see if it be possible to sift out from the opinions of the various observers some rational working basis to guide those of us who are frequently wavering between the question as to whether a given case is medical or surgical.

A number of these cases when first seen, or when the disease is recognized, are bilateral and as this class is generally admitted to be medical I shall only mention it in passing.

The question one would like to have answered is this: Given a patient with an acute pyelonephritis involving only one kidney what is the best method of treatment?

Is there a definite line drawn between those that are surgical and those that are non-surgical manifested by a distinct set of symptoms and physical signs, or is it largely a question of experience, surgical or medical judgment, or must one have the "hunch" when to operate and when not? I believe that with a combination of the symptoms and physical signs, of course including laboratory and cystoscopic findings, fair judgment, and a reasonable amount of experience one may ordinarily arrive at a safe and sane decision.

Kretshmer states that most cases of acute pyelonephritis, in his experience, are non-surgical, that he has had only two cases that failed to clear up either under the usual medical treatment or lavage of the renal pelvis.

Kelly and Barnham (2) state that "the surgical treatment of acute pyelonephritis has, up to the present time, been very limited. It should be restricted to the severest type of infection. Surgeons have been deterred from operative procedures in these cases by the conviction that the disease is bilateral."

Brewer (3) too admits that many of these cases are non-surgical but in his experience far better results have been obtained in the severe type of infections by more radical measures. Because of several fatal cases following conservative measures in which autopsy demonstrated the lesion to be confined to one kidney, this observer undertook a series of experiments "with a view to determining the factors which caused a given blood infection to attack a single kidney." The results of these experiments were published as early as 1906 and although this author has written extensively on this subject since, his early conclusions remain practically unchanged.

I shall quote somewhat in detail from Dr. Brewer's writings because I feel that out of his experimental and clinical work on this subject he has formulated a rational clinical classification which has stood the test of years in his own practice and I believe it is of untold value to those who may use it as a guide.

Brewer began his investigations before he was familiar with the work of Albarrans and others who demonstrated that moderate quantities of pathogenic organisms could circulate

*Read before the Medical Association of Georgia, Savannah, May 2-4, 1923.

in the blood, under certain conditions, without producing lesions in the kidney; or Israel called attention to the possibility of grave renal suppuration being due to micro-organisms entering the blood from comparatively mild local infections as furuncles, paronychias, carbuncles, etc.

These experiments briefly consisted in producing a mild bacteremia in rabbits and dogs by injecting into the ear vein cultures of pathogenic organisms and lowering the resistance of one kidney by various degrees of trauma, introduction of a foreign body, or by the production of an artificial hydronephrosis. Later the effect of anaemia and passive hyperaemia was studied. A summary of the results shows that none of the control animals developed kidney lesions. Of the other 16 animals, 5 showed only mild lesions of the injured kidney, 2 of these animals dying within 24 hours of acute septicaemia. Of the remaining 11 all developed surgical lesions of the kidney. In 8 the lesions were unilateral and were limited to the injured kidney; in 3 the lesions were bilateral. In one of these only were the lesions equal in extent and severity. In the other 2 the lesions in the uninjured kidney were very mild in character.

These experiments strongly suggest that in the majority of the cases the lesion is primarily unilateral beginning in the kidney whose resistance has been lowered from one cause or another and that if we are able to recognize the disease while in this unilateral stage prompt treatment, according to the clinical outline of Brewer given below, should yield uniformly good results. Brewer divides the acute renal infections into three types: the hyperacute or fulminating, the subacute or intermediary, and the mild. I do not propose to burden you with a detailed symptomatology of these different types, as this may be found in the article referred to above, but simply to mention them is not sufficient.

"The first and gravest of these, the hyperacute or fulminating, fortunately rare, is so virulent that it often proves fatal long before any definite renal symptoms have time to develop." These cases have abdominal symptoms and are commonly mistaken for acute pancreatitis or some lesion of the gall

bladder or stomach, and the true condition is likely to be overlooked because of the slight local manifestations unless a more than ordinarily careful physical examination is made. Because of the scanty flow of urine from the affected kidney diluted by the increased flow from the normal kidney the small amount of pus and blood present in the bladder urine may be overlooked unless a very careful search be made for these. The use of the ureteral catheter will often be necessary to determine the absolute diagnosis. Cabot and Crabtree (4) hold that it is not sufficient to determine the presence of pus cells in the urine but in addition the character of the infecting organism, whether it be a coccus or a bacillus, because the treatment will be influenced largely by this finding. These investigators state that the lesions produced by the coccus primarily involve the cortical portions of the kidney and run their course uninfluenced by drugs. A coccus lesion having been diagnosed the treatment is largely surgical. The colon bacillus, on the other hand, attacks largely the secreting portion and is therefore amenable to drug treatment. These writers state that it does not and will not produce the acute lesions which require surgery. Brewer does not make this distinction. In 16 cases of the hyperacute type, 2 were treated medically and died early; 4 were treated by nephrotomy and decapsulation, they died soon after the operation; the remaining 10 treated by early nephrectomy recovered promptly.

The subacute or intermediary type constitutes by far the largest class. Though "somewhat milder than the one just mentioned it is still associated with a grave prognosis . . . because if unrecognized and untreated it progresses insiduously to the development of one or more of the classical terminal lesions." A correct diagnosis is usually not difficult with the picture of enlarged, tender kidney, persistent fever of the remittent type, and little change in the general condition from day to day. These cases too require surgery but whether it be nephrectomy or nephrotomy must be determined by the local condition. Frequently the kidney can be saved by the more conservative operation and again such measures may have to be followed by secondary nephrectomy.

The third type, much milder than either of the preceeding, almost invariably ends in spontaneous recovery without serious damage to the kidney parenchyma. When on the right side it may be mistaken for subacute appendicitis. This type seems to furnish a rational explanation of the so-called "idiopathic pyelitis."

I wish now to report the following case, representing type 2, subacute or intermediary, firstly, because it may be of statistical value and secondly, as far as I am able to ascertain, it is the youngest patient on record to recover from a nephrectomy performed because of an infection.

Case Report

Baby H. A., 3½ months old, female, referred by Drs. McLean and Cheshire. One of a family of 8 children, one being a twin brother. Weight at birth 6½ pounds. Developed normally up to present illness at which time she weighed 12 pounds.

Present Illness. This began about Nov. 6th, 1923, but a physician was not summoned until the next day at which time Dr. Cheshire saw the case. He states that he found the baby suffering apparently from a mild coryza, slight cough, with temperature of 100. He did not consider the baby very ill but was called to see it again the next morning at which time the temperature was 104. and the baby apparently quite ill. There was still some coryza but the chest, throat and ears were normal. The abdomen was moderately distended but no masses could be palpated. The urine was not examined at this time. A styte was noted on the left upper lid. General eliminative measures were instituted but the baby did not improve. On the 17th Dr. E. K. McLean was called in consultation. At this time the throat seemed somewhat injected and also the right ear drum. The latter was incised but there was never any discharge though the temperature for the next 48 hours ran a more modified course but never became normal. Urine examination showed a number of pus cells, and the white blood count was 22,400 polynuclears being 75%. The abdomen was very much distended at times, but no tumor mass had been detected. The usual treatment for pyelitis was instituted. For an-

other week the clinical course remained practically unchanged, and on the 24th after an enema, a mass was felt in the right side corresponding to the right kidney. It was then that I was asked to see the little patient.

Examination: Baby lying listlessly on mother's lap, very well nourished but extremely pale. Hemoglobin a few days before this was less than 30%. Lips dry and parched. Temperature 102 degrees, pulse 160. Skin dry, abdomen distended symmetrically, tympanitic. Frequent non-productive coughs. On palpation the abdomen is somewhat tense due to distention but there is no muscular rigidity. On the right side, extending from beneath the costal border to 1 cm. below the crest of the ilium, can be felt a definite mass. The mass is firm but not hard, and can be felt posteriorly on bimanual examination. With tumor between the examining fingers there is at times an indefinite sense of fluctuation. The mass is fairly movable in all directions. The slightest pressure on tumor not only causes the baby to cry, but never fails to reproduce a spasm of non-productive coughs. The left kidney cannot be palpated. On account of the baby's size cystoscopic examination was out of the question. Another urine examination showed the following; straw color; cloudy; alkaline; albumen plus 1; sugar negative; no casts; pus plus 3; blood cells, few; bacteria plus 4. The type of organism not stated. White blood count 22,000. Hemoglobin not done again.

Impression. In view of the apparent sudden appearance of the tumor with decrease of the amount of pus in the urine a tentative diagnosis of obstructed hydronephrosis was made and operation advised. This advice was accepted and immediate operation performed.

Operation. Nov. 24th 1922, 9.00 P. M. Light chloroform anaesthesia. Oblique lumbar incision. The fatty capsule was noted to be rather swollen, hyperaemic and oedematous. Through an opening in this the kidney was easily delivered into the wound. There was no evidence of even a mild hydronephrosis so we had to abandon the preoperative diagnosis. Through the true capsule could be seen yellowish-white areas scattered among larger areas of congestion. The yellowish-white areas were raised above the surface. As the patient's con-

dition did not allow of much discussion nephrectomy was performed. Unfortunately the thin peritoneum was torn during this procedure and its closure consumed considerable of the operating time. But including this the operation consumed only 30 minutes and the patient stood it far better than had been expected.

Post-operative Course. The next morning the temperature had dropped to normal and the coughing had ceased.

Nov. 27th. Slight wound infection causing elevation of temperature which subsided when drainage was instituted. 25 cc. of father's blood, citrated, given in right external jugular vein. No reaction. Definite improvement followed this treatment.

Nov. 30th. Continued improvement. Second transfusion of 25 cc. father's citrated blood. No reaction. Color much improved. Appears bright, nurses well, temperature normal, pulse 136.

Dec. 1st. Dismissed from hospital in good condition, wound draining slightly. Temperature normal.

This patient moved away from Thomasville about Jan. 1st. so that I have not had an opportunity to see her but a recent letter from the father states that she is perfectly well. A urine specimen received two weeks ago showed no pus, blood or albumen.

Pathological Report. The gross specimen in this case showed, on section, no evidence of hydronephrosis and throughout the substance of the kidney were small yellowish-white areas similar to those noted on the outer surface. A few of these contained pus but the greater number were merely areas of necrosis. The microscopic examination was made by Dr. R. V. Lamar of Univ. of Ga. Medical Dept. and his report was as follows; "The kidney in case of baby H. A. shows wide spread and advanced changes of subacute, suppurative pyelonephritis with extensive necrobiotic and necrotic changes and coagulated necrosis."

In commenting on such cases Braasch (5) states that at the Mayo Clinic they have performed nephrectomies in about 30 children with infected kidneys but in every one there was evidence of some hydronephrosis. In his experience it is most unusual for a cortical suppuration to occur in the absence of

hydronephrosis. I am certain there was none in this case. The exciting cause in this case remains uncertain though the organisms may have entered the blood stream from the innocent looking sty. Bumpus and Meisser (6) seem to have demonstrated that it is not essential to have a predisposing factor in the kidney itself but that pyelonephritis may often be due to focal infections harboring streptococci which have a selective affinity for the urinary tract."

The only case on record of an earlier nephrectomy was reported by M. S. Kakels (7). This infant was 6 weeks old and the operation was done for a large congenital hydronephrosis, not for infection. Because of the size of the tumor in his case he selected the transperitoneal route for its removal. In my case the kidney was easily removed through an oblique lumbar incision and I believe the posterior route to be the one of election whenever possible.

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THE CAMPAIGN FOR THE CONTROL OF CANCER IN GEORGIA

J. L. Campbell, M.D., F.A.C.S.,

Chairman Cancer Commission Medical Association of Georgia and State Chairman American Society for the Control of Cancer, Atlanta, Ga.

To The Medical Profession of Georgia:

Instead of an intensive campaign for only one week the American Society for the Control of Cancer has divided the United States into districts and will wage a campaign of four weeks in each beginning in the Northwest October 15, and ending in New England May 14, thus keeping the subject before the people during the entire winter. The Georgia campaign will occupy part of January and February.

For the past few months we have been completing the State organization and hope that the

work will gain greater headway this year than, ever before.

At the request of the National Headquarters, we have appointed permanent District Chairmen who in turn have appointed county and local chairmen. These are members of the County and State Medical Associations, so there will be no conflict in the work. The National Society is anxious to have its educational work controlled by members of the organized medical profession, but at the same time enlist the interest of the public by getting the Women's Clubs, Civic Organizations, County Board of Health, School Commissioners and School Boards and every newspaper in the State interested.

The Campaign in Georgia will begin January 15, 1934, and continue four weeks. In order to make a success, everything must be ready and thoroughly organized not later than six weeks in advance and the time to begin is now!

The District Chairmen would do well to communicate with each of their County and Local Chairmen and ask them to begin the selection of their committees at once, this is the most important step in the whole plan. Where it is possible, a District meeting should be held and every angle of the work discussed. All possible information will be furnished from the State Chairman's office.

In addition to the County Chairmen, the District Chairmen should select a strong committee consisting of a representative from each Religious Denomination, Women's Club and Parent-Teacher Association and a member from each Civic Organization in the district. This committee can outline the district work and make suggestions to the county chairmen. One or two meetings are all that will be necessary.

The County Chairman is in reality the most important member of the organization, for on him falls the bulk of the work. His Committee is the functioning unit and must be strong and willing to work for the good of humanity. It should consist of the President and Secretary of the County Medical Society, a representative from local Woman's Clubs, the County Health Officer or a member of the County Board of Health, the County School Commissioner or a member of the Board of Education, a Dentist, a Nurse and last but really the most important member,—the Editor of the county or local paper. The county papers can always be relied

upon to do all in their power for the good of the community and there is no force in the world more potent.

The organization as complete is as follows:

FIRST DISTRICT—Dr. Chas. Usher, Chairman, Savannah, Ga.

Chatham County, Dr. H. T. Exley, Savannah, Ga.

Effingham County, Dr. W. W. Smith, Clyo, Ga.

Screven County, Dr. Louis Hannah, Sylvania, Ga.

Jenkins County, Dr. C. Thompson, Millen, Ga.

Burke County, Dr. R. L. Miller, Waynesboro, Ga.

Bulloch County, Dr. R. L. Cone, Statesboro, Ga.

Bryan County, Dr. W. K. Smith, Pembroke, Ga.

Tattnal County, Dr. J. C. Collins, Collins, Ga.

Evans County, Dr. D. S. Clanton, Hagan, Ga.

Long, County, Dr. D. W. Baggs, Ludowici, Ga.

Candler County, Dr. B. B. Jones, Metter, Ga.

Liberty County, Dr. T. S. Layton, Hinesville, Ga.

McIntosh County, Dr. W. J. Long, Townsend, Ga.

SECOND DISTRICT—Dr. C. K. Sharp, Chairman, Arlington, Ga.

Colquitt County, Dr. S. M. Withers, Moultrie, Ga.

Decatur County, Dr. Geo. T. Clark, Bainbridge, Ga.

Dougherty County, Dr. W. L. Davis, Albany, Ga.

Grady County, Dr. W. A. Walker, Cairo, Ga.

Mitchell County, Dr. J. L. Brown, Camilla, Ga.

Thomas County, Dr. C. K. Wall, Thomasville, Ga.

Tift County, Dr. W. H. Hendricks, Tifton, Ga.

Calhoun County, Dr. C. J. Jenkins, Edison, Ga.

Early County, Dr. J. G. Standifer, Blakely, Ga.

Miller County, Dr. W. C. Hayes, Colquitt, Ga.

Baker County, Dr. C. W. Twitty, Elmodel, Ga.

Seminole, County, Dr. Thomas Chason,
Donalsonville, Ga.

Local Chairmen :

Dr. R. J. Pearson, Albany, Ga.

Dr. C. H. Watt, Thomasville, Ga.

Dr. C. B. Harrell, Moultrie, Ga.

Dr. J. M. Price, Tifton, Ga.

Dr. R. F. Wheat, Bainbridge, Ga.

THIRD DISTRICT—Dr. G. Y. Moore,
Chairman, Cuthbert, Ga.

Ben Hill County, Dr. W. P. Coffee, Fitz-
gerald, Ga.

Clay County, Dr. H. R. Ingram, Coleman,
Ga.

Crisp County, Dr. A. J. Whelchel, Cordele,
Ga.

Dooley County, Dr. V. C. Daves, Vienna, Ga.

Lee County, Dr. H. T. Simpson, Smithville,
Ga.

Macon County, Dr. C. A. Greer, Oglethorpe,
Ga.

Quitman County, Dr. Loren Gray, George-
town, Ga.

Randolph County, Dr. W. W. Crook, Cuth-
bert, Ga.

Schley County, Dr. B. L. Bridges, Ellaville,
Ga.

Stewart County, Dr. J. M. Kenyon, Richland,
Ga.

Sumpter County, Dr. Bowman J. Wise,
Plains, Ga.

Taylor County, Dr. S. H. Bryan, Reynolds,
Ga.

Terrell County, Dr. J. T. Arnold, Parrott, Ga.

Turner County, Dr. J. H. Moore, Sycamore,
Ga.

Webster County, Dr. C. G. Lunsford, Weston,
Ga.

Local Chairmen :

Dr. E. A. Russell, Fitzgerald, Ga.

Dr. J. A. Ward, Cordele, Ga.

Dr. J. T. Stukes, Americus, Ga.

Dr. J. G. Dean, Dawson, Ga.

FOURTH DISTRICT—Dr. J. A. Thrash,
Chairman, Columbus, Ga.

Coweta County, Dr. Joseph B. Peniston, New-
nan, Ga.

Carroll County, Dr. Charles C. Fitts, Carroll-
ton, Ga.

Troup County, Dr. Wallace H. Clark, La-
Grange, Ga.

Meriwether, Dr. F. P. Norman, Greenville,
Ga.

Harris County, Dr. L. G. Parham, Chipley,
Ga.

Muscogee County, Dr. W. L. Cooke, Colum-
bus, Ga.

Chattahoochee County, Dr. Chas. N. Howard,
Cusseta, Ga.

Marion County, Dr. Robert L. McMichael,
Buena Vista, Ga.

Talbot County, Dr. William C. Douglas,
Talbotton, Ga.

FIFTH DISTRICT—Dr. M. C. Pruitt,
Chairman, Atlanta, Ga.

Fulton County, Dr. E. C. Thrash, Atlanta,
Ga.

Fulton County, Dr. H. R. Donaldson, At-
lanta, Ga.

Fulton County, Dr. Grady Clay, Atlanta, Ga.

Fulton County, Dr. Jos. P. Bowdoin, Atlanta,
Ga.

Fulton County, S. L. Silverman, D.D.S.,
Atlanta, Ga.

Fulton County, Dr. F. K. Boland, Atlanta,
Ga.

Fulton County, Dr. W. E. Quillian, Atlanta,
Ga.

Fulton County, Dr. Nevin Adkins, Atlanta,
Ga.

Fulton County, Dr. R. R. Daly, Atlanta,
Ga.

Fulton County, Dr. Chas. E. Waits, Atlanta,
Ga.

Fulton County, Dr. C. W. Roberts, Atlanta,
Ga.

Fulton County, Dr. Bert Wagon, Atlanta,
Ga.

Fulton County, Miss Jackson, Atlanta, Ga.

DeKalb County, Dr. Chas. Patillo, Decatur, Ga.

DeKalb County, Dr. Wiley S. Ansley, De-
catur, Ga.

DeKalb County, Dr. James F. Pittman, De-
catur, Ga.

Campbell County, Dr. R. T. Camp, Fairburn,
Ga.

Campbell County, Dr. W. R. Camp, Fair-
burn, Ga.

Campbell County, Dr. T. J. Bussey, Fairburn,
Ga.

Campbell County, Dr. T. P. Bullard, Pal-
metto, Ga.

Douglas County, Dr. D. Housworth,
Douglasville, Ga.

Douglas County, Dr. J. M. Boyd, Douglas-
ville, Ga.

Douglas County, Dr. R. H. Pool, Douglasville, Ga.

SIXTH DISTRICT—Dr. C. D. Cleghorn, Chairman, Macon, Ga.

Bibb County, Dr. A. R. Rozer, Macon, Ga.

Monroe County, Dr. Geo. Alexander, Forsyth, Ga.

Lamar County, Dr. C. H. Willis, Barnesville, Ga.

Pike County, Dr. J. R. Graves, Zebulon, Ga.

Butts County, Dr. A. F. White, Flovilla, Ga.

Henry County, Dr. E. L. Crawford, Locust Grove, Ga.

Fayette County, Dr. O. T. Malone, Fayetteville, Ga.

Jasper County, Dr. J. H. Bullard, Machen, Ga.

Jones County, Dr. J. H. Riley, Haddock, Ga.

Crawford County, Dr. J. E. L. Johnson, Roberta, Ga.

Upson County, Dr. A. H. Black, Thomaston, Ga.

Spalding County, Dr. J. R. Anthony, Griffin, Ga.

Clayton County, Dr. H. D. Kemper, Jonesboro, Ga.

Local Chairmen:

Dr. G. Y. Massenburg, Macon, Ga.

Dr. J. M. Anderson, Barnesville, Ga.

SEVENTH DISTRICT—Dr. J. H. Hammond, Chairman, LaFayette, Ga.

Cobb County, Dr. W. H. Perkinson, Marietta, Ga.

Haralson County, Dr. W. H. Malone, Tallapoosa, Ga.

Polk County, Dr. C. Van Wood, Cedartown, Ga.

Murray County, Dr. S. A. Brown, Eton, Ga.

Floyd County, Dr. W. H. Lewis or Dr. T. J. McCall, Rome, Ga.

Bartow County, Dr. S. M. Howell, Cartersville, Ga.

Whitfield County, Dr. Trammell Starr, Dalton, Ga.

Gordon County, Dr. J. S. McLain, Calhoun, Ga.

Catoosa County, Dr. W. G. Green, Ringgold, Ga.

Walker County, Dr. J. M. Underwood, LaFayette, Ga.

Dade County, Dr. D. S. Middleton, Rising Fawn, Ga.

Chattooga County, Dr. W. J. Bryant, Summerville, Ga.

EIGHTH DISTRICT—Dr. H. M. Fullilove, Chairman, Athens, Ga.

Clarke County, Dr. Jos. S. Stewart, Jr., Athens, Ga.

Elbert County, Dr. J. E. Johnson, Elberton, Ga.

Franklin County, Dr. S. D. Brown, Royston, Ga.

Hart County, Dr. W. E. McCurry, Hartwell, Ga.

Madison County, Dr. M. P. Moore, Carlton, Ga.

Morgan County, Dr. D. M. Carter, Madison, Ga.

Newton, Ga., Dr. W. D. Travis, Covington, Ga.

Putnam County, Dr. S. A. Clark, Eatonton, Ga.

Walton County, Dr. J. K. McClintic, Monroe, Ga.

Wilkes County, Dr. C. C. Wills, Washington, Ga.

NINTH DISTRICT—Dr. M. B. Allen, Chairman, Hoschton, Ga.

Jackson County, Dr. J. H. Campbell, Jefferson, Ga.

Gwinnett County, Dr. D. C. Kelley, Lawrenceville, Ga.

Barrow County, Dr. W. T. Randolph, Winder, Ga.

Habersham County, Dr. P. Y. Duckett, Cornelia, Ga.

Rabun County, Dr. James Green, Clayton, Ga.

Stephens County, Dr. Jeff Davis, Toccoa, Ga.

Hall County, Dr. J. K. Burns, Jr., Gainesville, Ga.

Union County, Dr. C. J. Welborn, Blairsville, Ga.

Fannin County, Dr. E. L. Prince, Morganston, Ga.

Dawson County, Dr. W. C. Chastain, Dawsonville, Ga.

Towns County, Dr. R. T. Coleman, Hiawassee, Ga.

Forsyth County, Dr. Marcus Mashburn, Cumings, Ga.

White County, Dr. L. G. Neal, Cleveland, Ga.

Cherokee County, Dr. Robert Bradley, Ball Ground, Ga.

Milton County, Dr. W. D. Martin, Alpharetta, Ga.

Gilmer County, Dr. Ed. Watkins, Jr., Ellijay, Ga.

Lumpkin County, Dr. S. A. West, Dahlonega, Ga.

Local Chairman:

Dr. Pratt Cheek, Gainesville, Ga.

TENTH DISTRICT—Dr. W. W. Battey, Chairman, Augusta, Ga.

Glascocock County, Dr. James L. Kelley, Gibson, Ga.

Lincoln County, Dr. E. R. May, Lincolnton, Ga.

Columbia County, Dr. Pierce G. Blanchard, Appling, Ga.

Jefferson County, Dr. J. O. Kelley, Avera, Ga.

Warren County, Dr. R. A. Cason, Norwood, Ga.

Washington County, Dr. E. A. Harris, Sandersville, Ga.

Hancock County, Dr. E. S. Jernigan, Sparta, Ga.

Williamson County, Dr. Jas. H. Duggan, Irwinton, Ga.

Baldwin County, Dr. H. D. Allen, Milledgeville, Ga.

Taliaferro County, Dr. A. H. Beasley, Crawfordville, Ga.

McDuffie County, Dr. Sterling Gibson, Thomson, Ga.

Burke County, Dr. R. L. Miller, Waynesboro, Ga.

Richmond County, Dr. G. T. Bernard, Augusta, Ga.

ELEVENTH DISTRICT—Dr. A. G. Little, Chairman, Valdosta, Ga.

Lowndes County, Dr. A. G. Little, Valdosta, Ga.

Echols County, Dr. J. W. Pennington, Howell, Ga.

Brooks County, Dr. J. R. McMichael, Quitman, Ga.

Cook County, Dr. S. G. Ethridge, Sparks, Ga.

Berrien County, Dr. L. A. Carter, Nashville, Ga.

Lanier County, R. N. Burch, Milltown, Ga.

Clinch County, Dr. H. G. Huey, Homerville, Ga.

Ware County, Dr. W. M. Folks, Waycross, Ga.

Charlton County, Dr. Dallas Williams, Folkston, Ga.

Glyn County, Dr. J. W. Simmons, Brunswick, Ga.

Wane County, Dr. J. T. Colvin, Jesup, Ga.

Pearce County, Dr. D. T. Rankin, Blackshear, Ga.

Camden County, Dr. G. R. Thigpen, St. Marys, Ga.

Ben Hill County, Dr. W. D. Dorminy, Fitzgerald, Ga.

Turner County, Dr. W. L. Story, Ashburn, Ga.

Appling County, Dr. H. C. McCracken, Baxley, Ga.

Jeff Davis County, Dr. J. M. Hall, Hazlehurst, Ga.

Irwin County, Dr. J. C. Luke, Ocilla, Ga.

Coffee County, Dr. T. H. Clarke, Douglas, Ga.

TWELFTH DISTRICT—Dr. T. C. Thompson, Chairman, Vidalia, Ga.

Dodge County, Dr. J. Cox Wall, Eastman, Ga.

Bleckley County, Dr. R. L. Whipple, Cochran, Ga.

Pulaski County, Dr. E. C. Brown, Hawkinsville, Ga.

Johnson County, Dr. J. W. Brinson, Wrightsville, Ga.

Wilcox County, Dr. C. D. McRea, Rochelle, Ga.

Montgomery County, Dr. J. W. Palmer, Ailey, Ga.

Telfair County, Dr. Melton D. Council, McRea, Ga.

Twiggs County, Dr. J. G. Slappey, Jeffersonville, Ga.

Laurens County, Dr. O. H. Cheek, County Health Officer, Co. Chair., Dublin, Ga.

Laurens County, Dr. J. L. Weddington, City Chairman, City of Dublin, Ga.

Toombs County, Dr. I. E. Aaron, Lyons, Ga.

Wheeler County, Dr. W. A. Rivers, Glenwood, Ga.

Houston County, Dr. W. S. White, Ft. Valley, Ga.

Emanuel County, Dr. E. T. Coleman, Graymount, Ga.

Truetlen County, Dr. O. B. Moye, Soperton, Ga.

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to the Welfare of the Medical Profession of Georgia.

Office of Publication, 208 Professional Bldg.,
65 Forrest Ave., Atlanta, Ga.

October, 1923

ALLEN H. BUNCE, M. D., Editor
M. C. PRUITT, M. D., Business Manager
Publication Committee
CHAS. USHER, M. D.
W. A. MULHERIN, M. D.
T. C. THOMPSON, M. D.

Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

SAVANNAH HEALTH CONFERENCE

To the Members of the Medical
Association of Georgia:

The time has come when the people of Georgia should be informed as to what has happened to Georgia. We all realize that something is wrong, that we are stagnating, that new enterprises, new people, new developments are not coming into our State as they formerly did. The time was when Georgia and her industries, her resources, her progress were on the lips of every one. Georgia was known throughout the United States as "The Empire State of the South." Today we occupy fourth place. The change has been gradual, insidious, until today we are beginning to feel the pinch of lack of business, lack of work for our people. There is a general feeling of depression. The one question is, "What is the trouble and what the remedy?"

After much thought on behalf of our bankers and other men of large interests, it was discovered that the trouble with Georgia was due to bad health conditions. As shown

by the records of the United States Public Health Bureau, Georgia had neglected, through inadequate appropriations to the State Board of Health, the serious menace to our welfare, preventable diseases.

The State of Georgia is now looking to the State Medical Association to lead the fight for good health through the control of preventable diseases.

Your president for several months has been talking this matter over with our leading captains of industry, and has succeeded in getting the co-operation of the Savannah Board of Trade and men of affairs throughout Georgia. The business man realizing that the fight is purely a medical problem, has kindly offered us his co-operation and financial support through the Savannah Board of Trade. It has been decided to ask for a conference between the Medical Association of Georgia, our Boards of Trade, our State, County and City Governments, and the business men of Georgia to be held in Savannah on October twenty-sixth.

The conference will be simply a business matter in which ideas will be discussed and the best method adopted for reaching the ultimate end—the control of preventable diseases in Georgia. It has been suggested that this convention should ask the Governor to incorporate in his call for a special session of the Legislature the matter of an amendment to the Constitution of Georgia, whereby ten cents per capita of the State's income shall be devoted to public health work. Second, that an attempt be made to have all county commissioners in Georgia adopt the Ellis Health Law. If these two things can be accomplished Georgia will have sufficient funds through the aid of the International Health Board and the United States Public Health Service, and county appropriations under the Ellis Law, which will total about one million two hundred thousand a year, to fight preventable diseases.

If this program is carried out, Georgia with her resources will again become the "Empire State of the South." I wish the members of your society would study this matter thoroughly, take it up with your legislators, the various business and civic clubs of your communities, and show them the

necessity for an immediate and strong effort to be made to save Georgia from further slipping backward.

It will astonish you to know that many of the South Georgia counties have lost twenty per cent of their population within the last ten years. The aggregate loss to all of the South Georgia counties for ten years is two per cent of their population. With this fact staring us in the face, we can see why we do not progress. Our population is fifty-eight per cent inefficient, due to infection of preventable diseases. Men of means and large industries will not locate in a State where such conditions exist.

Florida appropriates twenty-five cents per capita, North Carolina twelve cents per capita, South Carolina ten cents per capita, Georgia the magnificent sum of three and three-tenths cents per capita for health work. Is it any wonder that Georgia is slipping? The Legislature appropriates five hundred thousand annually to teach the people how to raise pigs through the Agricultural Department at the same time it appropriates ninety thousand dollars to keep man from dying of preventable diseases.

The remedy is in the hands of the medical profession. We know the dire consequences of neglect of public health matters. It is up to our association to educate the people of Georgia. A medical man made the Panama Canal possible. He made Cuba a paradise, and he can make Georgia what she rightfully is—the "Empire State of the South."

Hope you will consider this matter carefully and seriously and either come in a body or send a delegation to Savannah on October twenty-sixth.

Fraternally yours,

J. W. DANIEL,

President Medical Ass'n of Georgia.

OPEN LETTER TO PHYSICIANS OF GEORGIA

Dear Doctor:

We want your co-operation in making the State-wide Health Conference which is to be held in Savannah on October 26th, a success. Can we count on you to do your part?

See your business men, tell them the importance of this conference, ask them to come down and give us their ideas. See your representatives, your county commissioners, your mayor and alderman, see the doctors, the Federation of Womens Clubs and others, talk health, talk Georgia, talk progress and how we can come back if we will only do something other than cry over spilled milk.

How can we get results? By all pulling together, all telling the Legislature, the Senate, Governor, our county commissioners what we want and how to give it to us. Instead of fighting, let's pull together. Let's convince those opposed that we are right.

Come to Savannah and bring others with you. Can we put you down as a delegate?

Yours truly,

JOHN W. DANIEL,

President.

POST-GRADUATE CLINICS

In carrying out the announced policy of the Medical Association of Georgia, the Georgia Medical Society of Savannah begs to announce the opening of the Post-Graduate Clinics on October 30, 1923.

The plan following will be to increase the interest in Diagnostic Medicine and Surgery, by bed-side demonstrations of physical examinations, history taking and laboratory methods. It is hoped that the methods pursued will be instructive and yet devoid of all intricate technical matters. The object being to teach methods that any physician can follow under any circumstances.

During the four days of the Clinic, between the hours 8 A. M. and 10 A. M., the surgeons of Savannah will hold operating clinics, which will be independent of the State Association Clinics, but all physicians will be invited to attend.

It is hoped that the medical profession of the State will respond and attend these clinics. The plan outlined being to rotate at intervals from one hospital center to another, thus covering the entire State, and making the clinics available to the profession at large without undue expense.

The physicians of Savannah are desirous

of making the clinic a success, and will ask that anyone having any constructive criticism to offer, kindly let them have the ideas, which will receive due and courteous consideration.

J. W. DANIEL,
President Medical Association of Ga.

POST-GRADUATE CLINIC

Savannah, Ga., Oct. 5, 1923.

To the Editor:

In order to carry out the policy of the State Medical Association as outlined at the beginning of the year, Savannah will hold its first Post-Graduate Clinic the week beginning October 13th.

The time for the Clinic has been selected during the week of the Tri-State Fair in order that the physicians of the State may have reduced railroad rates. If they will bear this in mind in purchasing their tickets, their expenses can be cut considerably.

It is hoped that the physicians of the State will co-operate with Savannah and make this first clinic a success. I am attaching the daily schedule for publication in the Journal.

CHAS. USHER,
Chairman Publicity Committee.

PROGRAM POST-GRADUATE CLINICS

to be Held at Savannah Oct. 30 Through
Nov. 2, 1923

TUESDAY, OCTOBER 30, 1923,
Savannah Hospital.

10 to 11

Physiology of Digestion, Dr. W. R. Daney.
The Acute Abdomen, Dr. H. H. McGee.

11 to 12

Normal Chest, Dr. J. W. Daniel.
Fractures, Dr. L. W. Williams.

12 to 1

Skin Clinic, Dr. S. E. Bray.
Rectal Surgery, Dr. Geo. L. Touchton.

3 to 4

Some Practical Points in Obstetrics, Dr. R. V. Martin.
Pelvic Infections, Dr. W. H. Myers.

4 to 5

Diseases of Children, Dr. A. J. Waring.
Foreign Bodies in Ear, Eye, Nose and Throat, Dr. G. T. Olmstead.

8 P. M. at Hall Georgia Medical
Society

Medicine, Past and Present, Dr. A. J. Moon-ey, Statesboro.

WEDNESDAY, OCTOBER 31, 1923
Park View Sanitarium

10 to 11

X-ray Demonstration, Dr. W. A. Cole.
Pelvic Sepsis, Dr. S. Usher.

11 to 12

Heart, Dr. Ralston Lattimore.
Deafness and Its Causes, Dr. G. H. Fag-gart.

12 to 1

Syphilis, Dr. J. S. Howkins.
Surgery of Right Abdomen, Dr. C. Usher.

3 to 4

Tubercular Chest, Dr. J. O. Baker.
Importance of X-ray in Suspected Fractures, Dr. H. T. Exley.

4 to 5

Normal Labor, Dr. Duncan Owens.
Routine Ex. Gonorrhea, Dr. L. W. Shaw.

8 P. M. Hall Georgia Medical Society

X-ray, History and Treatment, Dr. E. R. Corson, Savannah.

THURSDAY, NOVEMBER 1, 1923
St. Joseph's Hospital

10 to 11

X-ray Diagnosis and Treatment, Dr. E. R. Corson.
Pyelitis, Dr. Wm. Shearhouse.

11 to 12

Jaundice, Dr. H. T. Compton.
Minor Surgery, Dr. W. B. Crawford.

12 to 1

Malaria, Dr. V. H. Bassett.
Procidentia, Dr. Herman W. Hesse.

3 to 4

Neurological Examination, Dr. M. J. Eagan.
The Common Diseases of the Eye, Dr. G. H. Lang.

4 to 5

Ante-Partum Care, Dr. Raymond V. Harris.
Perineal Lacerations, Dr. Jas. N. Carter.

FRIDAY, NOVEMBER 2, 1923

Marine Hospital

10 to 11

Laboratory Diagnosis, Dr. Lee Howard.
Gastric and Duodenal Ulcer, Dr. Walter Norton.

11 to 12

Amoeba Dysentery, Drs. J. T. Burkhalter and Howard.
Hematuria, Dr. Harry Righton.

12 to 1

Typhoid, Dr. Gordon L. Groover.
Surgery of the Chest, Dr. T. P. Waring.

3 to 4

Radium, Dr. Robert Drane.
Minor Surgery, Dr. Lawrence Lee.

4 to 5

Examination Chest, Dr. Walter Wilson.
The Accessory Nasal Sinuses, Dr. St. Julian DeCaredue.

Tri-State Fair and Railroad Rates

The time for the Clinic has been selected during the week of the Tri-State Fair in order that the physicians of the State may have reduced railroad rates. If they will bear this in mind in purchasing their tickets, their expenses can be cut considerably.

**PROGRAM: CLINIC, BIBB COUNTY
MEDICAL SOCIETY**

To the Editor:

You will find here enclosed a copy of the program of Lectures and Demonstrations for the Post-Graduate Clinic that is to be held by the Bibb County Medical Society November 5th to 10th. Please give it space in the next issue of the State Journal.

O. R. THOMPSON,
Secretary Bibb County Medical Society.

**SCHEDULE POST-GRADUATE CLINIC
for the
GENERAL PRACTITIONER
to be given by**

**THE BIBB COUNTY MEDICAL SOCIETY
November 5th to 10th, 1923
Macon, Ga.**

All lectures and demonstrations will be held at the Macon Hospital.

Monday, November 5th, A. M.

9:00-10:00—Fractures, Diagnosis and Treatment, Dr. W. A. Newman.
10:00-11:00—Prophylaxis and Early Diagnosis of Malignancy, Dr. C. Harrold.
11:00-12:00—Fractures, Dr. A. R. Rozar.

Monday, November 5th, P. M.

2:00- 3:00—Rural Sanitation, Dr. C. L. Ridley.
3:00- 4:00—Heart, Dr. R. Stovall.
4:00- 5:00—Gastro-intestinal Diseases in Children, Dr. T. D. Walker.

Tuesday, November 6th, A. M.

9:00-10:00—X-ray Diagnosis of Surgical Conditions, Dr. C. D. Cleghorn.
10:00-11:00—Minor Surgery, Dr. W. J. Little.
11:00-12:00—Prenatal Care, Dr. O. R. Thompson.

Tuesday, November 6th, P. M.

2:00- 3:00—Some of the More Common Types of Mental Diseases, Dr. Y. H. Yarbrough.
3:00- 4:00—Nasal Obstruction and its Effect on the Accessory Sinuses, Dr. C. L. Pennington.
4:00- 5:00—Focal Infection, Dr. W. C. Pumpelly.

Regular meeting of the Bibb County Medical Society, 8:00 P. M. Macon Hospital. All visiting doctors are cordially invited to attend.

Wednesday, November 7th, A. M.

9:00-10:00—Cystitis, Dr. W. E. Mobley.
10:00-11:00—Surgical Diagnosis, Dr. O. H. Weaver.
11:00-12:00—Treatment of Specific Urethritis, Dr. E. Corn.

Wednesday, November 7th, P. M.

- 2:00- 3:00—Clinical Pathology, Dr. F. Mitchell.
 3:00- 4:00—The Importance of Detail in Diagnosis, Dr. Chas. Hinton.
 4:00- 5:00—Acute Infectious Diseases in Children, Dr. B. Bashinski.

Thursday, November 8th, A. M.

- 9:00-10:00—Deformities, Congenital and Acquired, Dr. W. A. Newman.
 10:00-11:00—Minor Surgery, Dr. C. H. Richardson.
 11:00-12:00—Fractures, Dr. Harry Moses.

Thursday, November 8th, P. M.

- 2:00- 3:00—Communicable Diseases and Terminal Disinfection, Dr. C. L. Ridley.
 3:00- 4:00—Focal Infection in Relation to its Effect on the Special Senses, Dr. M. M. Stapler.
 4:00- 5:00—Gastro-Intestinal Diseases, Drs. J. A. Fountain, F. A. Sprague.

Friday, November 9th, A. M.

- 9:00-10:00—Infectious Skin Diseases, Dr. J. M. Sigman.
 10:00-11:00—Surgical Diagnosis, Dr. G. Y. Massenburg.
 11:00-12:00—Delivery and Post Partum Care, Dr. B. M. Johnson.

Friday, November 9th, P. M.

- 2:00- 3:00—Some of the More Common Types of Mental Diseases, Dr. Y. H. Yarbrough.
 3:00- 4:00—Chest, Dr. T. E. Rogers.
 4:00- 5:00—Pediatric Clinic, Dr. R. L. Carter.

Banquet to the visiting doctors, guest of the Bibb County Medical Society, Macon Cafeteria, 7:30 P. M.

Saturday, November 10th, A. M.

- 9:00-10:00—Acute Pelvic Inflammatory Diseases, Dr. J. C. Anderson.
 10:00-11:00—Minor Surgery, Dr. J. P. Holmes.
 11:00-12:00—Syphilis, Diagnosis and Treatment, Dr. W. W. Meriwether.

Doctors from the following counties of the State are invited to attend the above clinics, and also those from other sections of the State, should they so desire:

Jasper, Putnam, Hancock, Butts, Spalding, Pike, Lamar, Monroe, Jones, Baldwin, Washington, Wilkinson, Twiggs, Bibb, Crawford, Upson, Talbot, Taylor, Houston, Bleckly, Johnson, Laurens, Dodge, Pulaski, Wilcox, Dooly, Macon, Schley, Marion, Sumter, Crisp, Randolph, Terrell, Lee, Turner, Worth, Mitchell, Colquitt, Tift, Ben Hill, Irwin, Telfair, Webster.

O. R. THOMPSON, M.D.

Secretary Bibb County Medical Society.

TURNER COUNTY IS DOING SPLENDID HEALTH WORK

My Dear Doctor Toepel:

We are doing what we can for our county but appreciate suggestions from the State.

We have put on our cancer lecture campaign to educate the laity in the importance of early diagnosis of that condition and its control.

Also we are examining school children free of charge and advising them as to the removal of tonsils and adenoids. In case of poor children we have arranged to operate on them free of charge, etc. Now we are trying to make a malarial survey of the county and effect a control in that malady.

Let us hear from you often and we shall be pleased to co-operate with you in any way for the benefit of the county and the State.

Fraternally yours,

JNO. T. MOORE, M.D.

Aug. 29, 1923.

Dr. A. H. Bunce, Secretary,
 Medical Association of Georgia,
 Atlanta, Ga.

My Dear Dr. Bunce:

I wish to congratulate you and your corps of workers and felicitate the members of the association upon the most excellent Journal which we are now receiving. The Journal of the Medical Association of Georgia is rapidly becoming one of the best Journals in the country. It has made steady progress and improvement from year to year and it

now stands at the top as a State Journal.

The local touch which you are giving it, making it embrace the activities of every county in the State is what will make it prized by every doctor in Georgia. It is the duty of each one of us to support you with all possible zeal in this excellent work.

Very truly yours,

E. C. THRASH,
Atlanta, Ga.

FIRST DISTRICT SOCIETY

The First District Medical Society held its mid-summer session at Savannah, August 23, 24, 1923. The meeting was called to order at 11 A. M. August 23 by the President, Dr. A. J. Waring of Savannah. The DeSoto Hotel was the scene of the opening session. The invocation was rendered by the Rev. S. B. McGlohon, Rector of St. Paul's Episcopal Church. The following scientific papers were read:

1. Stomach-Washing in Diseases of Infants—Dr. R. L. Miller, Waynesboro, Ga.
Discussion: Drs. J. W. Palmer, Ailey; J. W. Daniel, Savannah; A. J. Waring, Savannah, and Dr. Miller in closing.
2. The Faucial Tonsil as a menace to Health—Dr. B. H. Minchew, Waycross, Ga.
Discussion: Drs. J. W. Daniel, Savannah; F. F. Floyd, Statesboro; W. W. Evans, Halcynondale; R. Lattimore, Savannah, and Dr. Minchew in closing.
3. The Failing Heart—Dr. Ralston Lattimore, Savannah, Ga.
Discussion: Drs. J. W. Palmer, Ailey; J. W. Daniel, Savannah, and Dr. Lattimore.
4. Ruptured Uterus After the Use of Pituitrin—Dr. Thos. C. Thompson, Vidalia, Ga.
Discussion: Drs. R. L. Miller, Waynesboro; F. F. Floyd, Statesboro; M. R. Thomas, Savannah; J. W. Palmer, Ailey, and Dr. Thompson in closing.
5. The Everyday Treatment of Gonorrhoea—Dr. P. C. Quarterman, Valdosta, Ga.
Discussion: Drs. J. W. Shearhouse, Savannah; G. L. Touchton, Savannah; J.

S. Howkins, Savannah, and Dr. Quarterman in closing.

At the conclusion of the papers, there was a luncheon served by the Savannah Hospital, following which a series of clinics were held.

- 3 P. M.—Savannah Hospital.
The Use and Abuse of Forceps—Dr. R. V. Martin, Savannah.
The Field of Gynecology—Dr. L. W. Williams, Savannah.
Eclampsia—Dr. L. A. DeLoach, Savannah.
Treatment of Acute Brain Injuries by Spinal Puncture—Dr. M. H. McGee, Savannah.
- 4 P.M.—Medical Society Hall. Exhibition of X-Ray Plates.
Pulmonary Tuberculosis — Dr. Robt. Drane.
Empyema, Pneumonia, Lung Abscess, Syphilis of the Lung, Carcinoma of Lung, Hodgkins—Dr. W. A. Cole.
- 5 P. M.—Park View Sanitarium.
The Importance of Diet, Insulin in the Treatment of Diabetes.—Dr. J. W. Daniel.
Surgical Drainage—Dr. Chas. Usher.
Osteomyelitis—Dr. H. T. Exley.
- 6 P. M.—Telfair Hospital.
Chronic Lymphangitis; The Chronic Abdomen—Dr. Jabez Jones.
Practical Methods in Treating Diarrhoea of Infants—Dr. A. J. Waring.
Method of Treating Esophageal Stricture—Dr. Lawrence Lee.
- 9 P. M. — DeSoto Hotel. Malaria — Its Character, Prevalence, and Control.
Economic Value of Malaria to the City and State—Hon. Gordon Saussy, Savannah.
The Biological Interpretation of the Spread of Malaria—Capt. Bruce Mayne, Biologist, U. S. P. H. S.
County-Wide Malaria Control—Mr. N. E. Old, Sanitary Engineer, U. S. P. H. S.
The Breeding of Minnows in Malaria Control—Mr. P. E. Smith, Director of Malaria Control in Savannah.
Malaria and Vital Statistics—Dr. V. H. Bassett, Health Officer, Savannah.

Lantern slides were shown, and the public was invited.

August 24th, 1923.

- 9 A. M.—St. Josephs Hospital.
Chronic Ulcer of the Hand—Dr. H. W. Hesse.
Primary Carcinoma of Lung—Dr. Long.
The Diagnosis of Brills Disease—Dr. M. J. Egan.
- 10:15 A. M.—Oglethorpe Sanatorium.
Multiple Abscesses; Acute Infectious Arthritis; Thrombosis of Axillary Artery; Infected Compound Fracture of of Forearm—Dr. T. P. Waring.
- 11:30 A. M.—DeSoto Hotel.
Teeth and the Medical Man—Francis Wilson and Associates.
- 12 M.—DeSoto Hotel.
Chelitis Exfoliativa; Epidermophytosis; Iodine Dermatitis—Dr. S. E. Bray.
Syphilis—Dr. J. S. Howkins.
- 1 P. M.—DeSota Hotel.
Diseases of the Eye, Ear, Nose and Throat—Dr. G. H. Faggart and Dr. J. L. Hiers.
- 2 P. M.—Marine Hospital.
Microscopic Demonstration of Tumors, Anemias, and Leukemias—Dr. Lee Howard.

At the conclusion of the Clinics, the members and guests were transported to Bannon Lodge, Thunderbolt, where a sea-food dinner was served. The business session followed the dinner. Dr. Cleveland Thompson of Millen was elected President. Dr. H. H. McGee, of Savannah, was elected Vice-President. Dr. R. L. Miller, of Waynesboro, in behalf of the Burke County Medical Society, invited the Society to meet in Waynesboro next winter. The invitation was uproarously received. Plans for entertainment at Tybee had to be abandoned on account of the inclement weather.

E. CARSON DEMMOND,
Secretary.

September 3, 1923.

Editor, Journal of Medical Association
of Georgia,
Atlanta, Georgia.

Dear Sir:

During the meeting of the Southern Medical Association it is hoped that the Alumni of each of the Medical Schools represented will meet together at dinner. The evening of Wednesday, November 14th, has been set apart for that purpose and dining-rooms have been already engaged.

The committee desires to know approximately the number of diners to be expected at each of these reunions. Those who expect to attend should therefore notify the undersigned by the end of October.

I am, your faithfully,

TOM A. WILLIAMS

Chairman Alumni Dinners, Southern Medical Association.

WASHINGTON MEETING OF THE SOUTHERN MEDICAL ASSOCIATION

The Southern Medical Association will hold its seventeenth annual meeting at Washington, D. C., Monday, Tuesday, Wednesday and Thursday, November 12-15, 1923. Dr. W. S. Leathers, Executive Officer, Mississippi State Board of Health, Jackson, Mississippi, is President.

This meeting will be made up of twenty sections and conjoint meetings—the programs of these meetings will cover every phase of scientific medicine and surgery.

The President of the United States will receive informally the members of the Southern Medical Association and their wives, Thursday, November 15th, at 12:30 p. m. at the White House. Of special interest to the ladies will be the reception at the Washington Club on Tuesday afternoon where Mrs. Woodrow Wilson will be the guest of honor. The usual reception to the President of the Southern Medical Association will be held on Tuesday night at the New National Museum, one of the most beautiful public buildings of Washington, a detachment of the Marine Band furnishing the music. Other special entertainments being received.

At the first general session on Monday

night, in addition to the address of the President, Dr. Leathers, there will be an address by Dr. Geo. E. Vincent, President of the Rockefeller Foundation, New York, N. Y.; Oration on Public Health by Dr. W. S. Rankin, State Health Officer of North Carolina; Oration on Medicine by Dr. Stewart R. Roberts, Atlanta, Georgia; and Oration on Surgery by Dr. J. W. Barksdale, Jackson, Miss.

A joint dinner by the Section on Surgery and the Section on Radiology, as well as a number of section dinners, will be interesting features of Tuesday evening. The Alumni Reunions which promise to be an outstanding feature of this meeting will be held on Wednesday night and it is expected that there will be large groups present from all of the leading medical schools.

Physicians who golf are urged to bring their clubs. There will be a golf tournament at which the usual prizes will be offered. Play will be over the championship course of the Columbia Country Club.

The University of Virginia Hospital, Charlottesville, have already announced special clinics for Friday and Saturday following the meeting. While no definite announcement has been made yet, it is anticipated that Johns Hopkins and the University of Maryland will arrange clinic programs for Friday and Saturday following the Washington sessions.

Washington has many splendid hotels and every one is assured of comfortable accommodations this year. Special reduced rates have been granted by railroads on the certificate plan. Each member of the Southern Medical Association will receive a certificate without application for it. Any physician who is a member of his state and county medical society although not a member of the Southern Medical Association, who desires to attend this meeting, can have the benefit of these reduced rates by requesting a certificate from the association office.

NEWS ITEMS

Dr. Samuel Darling, of the Rockefeller Foundation, was with the Randolph County Medical Society Meeting, August 6, and gave a most interesting talk on malaria.

The finest health resort in the South is to be built in Atlanta on Peachtree Road. It is to be known as the Blackman Terrace. The building will be four stories high, containing 75 rooms for guests, a dining room, a roof garden, an auditorium and gymnasium. One of the conditions of the issuance of the permit was that surgical, alcoholic, narcotic and mental cases should not be treated at the resort. Its furnishings will include elaborate hydrotherapy and electrical equipment. The Blackman Terrace is to be operated under the direction of Dr. W. W. Blackman.

Dr. Earl Miller has been appointed Director of the Department of Experimental Medicine of Parke, Davis & Company, Detroit, to fill the vacancy following the death of Dr. Ezra Read Larned, who was the originator and organizer of this department and occupied the position as head of the department until his death. Dr. Miller was assistant to Dr. Larned for twelve years and has a wide acquaintance among medical men interested in clinical research work.

A new clinic for underdeveloped white children, under the sponsorship of the Albany Kiwanis Club, has been opened at Albany, Ga. The Kiwanis Club rented quarters and bought equipment for the clinic and the Albany physicians and dentists agreed to give their services free to children whose parents are not able to pay.

The many friends of Dr. Thomas J. Blackshear will be sorry to learn that he has left Dublin, Ga., to accept a position with two hospitals as eye, ear and nose specialist in North Carolina. Dr. C. A. Hodges, who has recently returned from New York, will carry on Dr. Blackshear's work.

The Semi-Annual Convention of the Ninth District Medical Society, which was held September 19, 1923, at Gainesville, Ga., was very entertaining as well as instructive.

Dr. Seale Harris, Birmingham, Ala., has formed a partnership with Dr. J. P. Chapman. They have associated with them Dr. W. S. Geddes and Miss Thelma Green.

Word has been received from Dr. Samuel J. Sinkoe, of Atlanta, that he has reached Vienna, Austria, where he is getting some very interesting work in urology. Dr. Sinkoe expects to return to the States within the next few months.

Dr. Chas. D. Williams has moved from Vidalia to Soperton, Ga.

Dr. W. H. Bowdoin, formerly of Philomath, is now located at Statham, Ga.

The Savannah Valley Clinic, Augusta, Ga., has assumed full control of the Margaret Wright Hospital. The Clinic is now located at the Margaret Wright Hospital, 1345 Greene Street, Savannah.

A bill has been passed combining the Macon and Bibb County Health Departments, which will become effective January 1, 1924.

Dr. William Simpson Elkin, 24 Doctors' Building, Atlanta, announces that Dr. Dan Collier Elkin is now associated with him.

Dr. Roy Jones Holmes, formerly of Wadley, Ga., is now associated with Dr. Lewis Wine Bremerman at the Bremerman Urological Hospital, Chicago, Ill.

Dr. H. Stokes Munroe announces his removal from Columbus, Ga., to Charlotte, N. C.

The American Roentgen Ray Society held its Twenty-Third Annual Meeting at Chicago, Ill., September 18-21, 1923.

A meeting of interest was the Semi-Annual Meeting of the Second District Medical Society, at Sylvester, Ga., September 14, 1923.

The slogan, "The Biggest Meeting We Ever Had," was realized at the 30th Semi-Annual Convention of the Seventh District Medical Society of Georgia, which was held at Cartersville, Ga., September 26, 1923.

The Fifty-Third Annual Session of the Colorado State Medical Society was held at Glenwood Springs, Colorado, September 4, 5, and 6, 1923.

The Medical Society of the State of Pennsylvania held its Seventy-Third Annual Session at Pittsburgh, Pa., October 1, 2, 3, and 4, 1923.

The One Hundred and Tenth Annual Meeting of the Vermont State Medical Society was held at the High School Auditorium, Bennington, October 11-12, 1923.

Dr. M. M. Stapler and Dr. H. T. Harris, Macon, Ga., have opened a Home and School for the Deaf.

Drs. J. W. Edmondson, Wm. C. Thompson, A. T. Coleman and C. A. Hodges will open a clinic at Dublin, Ga., as soon as the necessary arrangements can be made.

BIRTHS

Dr. and Mrs. Warren Ashley Coleman, of Eastman, Ga., announce the birth of a little girl, who has been given the name of Emily Carr, September 8, 1923.

MARRIAGE

Dr. Wilmot Shipp Littlejohn, of Tugalo, Ga., and Miss Mary Rose Brown, of Americus, were married August 22, 1923. Dr. and Mrs. Littlejohn will make their home in Tugalo.

OBITUARY

Dr. J. H. Crozier, 69 years old, died at his home in Cedar Springs, September 22nd, from cerebral hemorrhage. He had practiced medicine in Cedar Springs for 43 years.

Dr. Robert N. Hogg, of West Point, Ga., died very suddenly August 20, 1923, at 50 years of age. Dr. Hogg was one of West Point's best known and most popular citizens and one of the most prominent physicians until retiring from active practice on account of failing health.

Dr. Forrest H. Phillips, prominent physician of Harlem, died at his home, August 24, 1923. He had been in ill health for several years.

A CASE REPORT OF MASTOIDITIS (DR. C. E. WARE)

Mr. W. O. J. Age 44 yrs, Railroad car builder.
Past History: Neg.

Present History: Had an attack of Influenza about April 1st, 1923, left ear began to pain him about seven days later, but he was able to resume his work, pain got worse and worse, was unable to sleep for several weeks, but received some relief from hot applications to left ear, claims that he has had no discharge from ear any time during the attack.

Was admitted to the Hospital on May the 10th, 1923. On examination, very tender over left mastoid, no perforation of drum, slight sagging of posterior canal wall. Temperature, and pulse both normal.

X-ray examination showed involvement of perisinus cells, and cells in tip of mastoid. The usual technique for mastoid operation was used, and on opening the field it was found to be very greatly congested, and bled profusely during the whole of the operation.

Free pus was found in the perisinus cells, no pus was found in antrum. Mastoid process cleaned out and closed, Aparacentesis was done, but no pus was found in the middle ear, but bloody serum was found. The ear drained for only two days. Two weeks after the operation the incision had entirely healed up. Patient has had no discomfort since the operation.

My reason for reporting this case is to show the unusual symptoms in these cases of mastoiditis following an attack of Influenza.

This patient seemingly had no systemic symptoms, temperature normal, pulse normal, no discharge from ear, his only complaint was pain in left ear.

THE GOLFER

Mr. Stymie—Whoever heard of a course with more than eighteen holes?

Mr. Dubbe.—Wait till they serve the Swiss cheese course and then count 'em yourself.—Hygeia.

UNLICENSED "DOCTOR" WARNED NOT EVEN TO PRESCRIBE CASTOR OIL

"If I hear of you prescribing even a dose of castor oil, I will send you to jail for twelve months," said Judge John D. Humphries to F. M. Welch, who had just been convicted of practicing medicine without a license. The case came up during the October term in the Fulton Superior Court.

Welch, who has been maintaining offices at 29 1-2 Marietta street, Atlanta, was fined \$500 and given twelve months in jail, but the jail sentence was suspended on payment of the fine, pending the good behavior of the defendant.

OCTOBER

The days grow short and winter comes apace;

The golfer now has but a month of grace;
The football player soaks himself in grime,
And tries to fight his way across the line;
The summer cold gives way to wint'ry sneezes;

The coal man smiles, for ev'ry prospect pleases.
—Hygeia.

Home and School for The Deaf



Approved, recognized methods for establishing natural hearing and speech for the deaf. Every deaf child should have causes of this affliction removed early. This institution is well equipped to study such causes and to remove them. Endorsed by the Macon Medical Society and the Kiwanis Clubs of Georgia.

M. M. Stapler, M. D., and H. T.

Harris, M.D., Macon, Georgia.

Medical Association of Georgia

Next Annual Meeting, Augusta, May 7, 8, 9, 1924.

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Volume XII

Atlanta, Ga., November, 1923

Number 11

VALUE OF PYELO-URETEROGRAMS IN OBSCURE KIDNEY LESIONS*

M. L. Boyd, M.D.

and

Earl Floyd, M.D.

Atlanta, Ga.



It is our wish to call attention to the value of pyelo-ureterograms in the diagnosis of obscure kidney conditions and to point out the necessity of employing just the right technique to obtain results. Case V is an example of the latter. He was cystoscoped, X-rayed, given functional tests and had several pyelograms—all without a correct diagnosis being made until a pyelogram was taken in a semi-erect position. Case IV not only illustrates the need of employing the correct technique but also the absolute need of a pyelo-ureterogram in making a diagnosis.

The symptoms which may arise from kidney lesions are so diverse and resemble so closely those arising from lesions in other organs that all of the special methods of obtaining direct information about the kidney are needed at times to reach a correct diagnosis—and in certain instances the desired information is not obtained in spite of the use of all other diagnostic methods until a pyelo-ureterogram has been made—e. g. in right sided nephroptosis in stout people where the kidney cannot be satisfactorily felt, it is often difficult to determine the real cause of the pain until a pyelo-ureterogram has been made.

Sometimes the pain from these abnormally located kidneys is felt almost altogether in front near the region of the appendix and as

there is often associated gastro-intestinal disturbance, it is not difficult to suspect appendicitis (Case III). Normal appendices have been removed on account of the pains of nephroptosis, but this confusion is the more excusable when we remember that it is usually the case that these patients have gastro-intestinal disturbances and are therefore the more likely to acquire an inflammation of the appendix. This was the sequence of events in a case we saw recently and in which it was necessary finally to remove the kidney.

A pyelo-ureterogram is indicated in almost every kidney case which is to be operated upon. It first of all locates definitely the position of the kidney and ureter and shows abnormalities in their shape, size and calibre, which enable us to diagnose many conditions, one of the most important being tumors which partially fill the calyces, or obliterate them by pressure (papilloma of the pelvis and hypernephroma). They show the position of stones in relation to the pelvis and calyces, abnormalities in the caliber of the ureter caused by kinks, pressure, or strictures, as well as abnormalities in the manner in which the ureter joins and therefore drains the kidney pelvis. All in all, pyelo-ureterograms have done more to obviate the necessity of exploratory operations upon the kidney than any other procedure so far developed, ureteral catheterization not excepted. Once upon a time, surgeons occasionally made the mistake of performing a nephrectomy in which they removed all the secreting kidney substance a patient had. Such a thing cannot be excused today since we can obtain the evidence which makes such a mistake unnecessary. Formerly it was an ordinary thing to explore a kidney to discover the

*Read before the Medical Association of Georgia, May 2-4, 1923.

cause of kidney pains or the origin of tumors in the kidney region. Today such an operation would be considered extraordinary, especially were it performed by a surgeon to whom ureteral catheterization and pyelo-ureterography were accessible.

As important as are pyelo-ureterograms, it is almost as important that the correct technique be employed in performing them—since otherwise the necessary evidence which could have been obtained to make a diagnosis would be lacking.

In the usual case the procedure is as described below. In extraordinary conditions, unusual methods have to be employed, with which we will not burden you. In brief, employing a lead infiltrated catheter, have the tip lie in the pelvis of the kidney—not in the ureter nor in a calyx. Inject a few cubic centimeters less of the solution used (sodium iodide or sodium bromide) than the measured kidney capacity. Take the first exposure with the patient lying down. Take the second exposure with the patient in the semi-sitting or standing position. The third after the catheter has been withdrawn to the lower ureter. Between these exposures the catheter is allowed to drain out the injected fluid and reinjections are made before each exposure, using care not to over distend the kidney if a syringe is used. A fairly large X-ray catheter (No. 7 or 8 F.) gives better results when the lumen of the ureter is large because the solution does not run back along it so readily. Many men, however, employ a No. 5-F in all cases.

It is far easier on the patient to have the cystoscopic room in the immediate neighborhood of the X-ray room and use a special cystoscopic table on which the exposure can be made in any position. We find this arrangement is more comfortable for the patient and offers a big saving in time.

The following briefly reported cases offer some interesting illustrations of obscure kidney lesions made evident by pyelo-ureterograms.

CASE NO. 1.

Grady Hospital No. 13,742.

Mrs. A. M. D., 38, married, housekeeper, American, admitted Aug. 11, 1922.

Complaint: Pain in the right side over the kidney.
F. H. Negative.



Fig. 1.—Normal pelvis and calyces. 7 c.c. of solution injected in both sides. The right side is on the reader's right. Note the almost straight downward curve of the left pelvis and ureter. On the right there is more of a curve but it is not acute enough to be abnormal. There is no abrupt termination of the pelvis where the ureter joins it. The left pelvis is opposite the twelfth thoracic vertebra. The right opposite the first lumbar.

P. H. Pneumonia at 11 years of age without complications. Again seven years ago (age 31) with pleurisy. An attack of tonsillitis 3 years ago was followed by articular rheumatism, but she was soon well. An attack of appendicitis eight years ago (age 30) caused her to have an operation for appendicitis—an appendectomy and a suspension of the uterus.

Marital: She has been married seventeen years. Seven pregnancies. No miscarriages. All seven deliveries were difficult and long drawn out. Forceps were used once. Five children living and well and two dead.

Six months after last pregnancy she began menstruating (about one and a half years ago) and then menstruated every two or three weeks. Each time she lost a good deal of blood for five to six days.

She was admitted to Grady Hospital May 10, 1922, on account of the bleeding and the records show that she had some laceration of the cervix and perineum, a slight cystocele and some chronic salpingitis and adhesions about the adnexa. The bladder urine was infected with organisms like colon bacillus in morphology and there was some pus present. Double ureteral catheterization showed no infection nor inflammation in the left kidney but colon bacilli and pus in the urine from the right side.

A 'phthalein test showed a normal output by both kidneys; about 20% in 20 minutes after an intravenous injection. A pyelogram showed a considerable enlargement of the right kidney pelvis (Fig. 2)

Further questioning then (May 1922) showed that for about six years she had been having pains in



Fig. 2 (Case 1). Right pyelo-ureterogram. Note the large dilation of the pelvis with a 60 c.c. injection of sodium bromide solution. The pelvis ends abruptly where the ureter begins. The position and size of the minor calyces would indicate that the pelvis was largely extra-renal. The minor calyces are dilated but not in proportion to the dilation of the pelvis. The ureter above the crest of the ilium can be seen to be a good deal dilated. Lower (in the pelvis) it is not so large. The kidney pelvis is about opposite the second and third lumbar vertebrae.

the right groin. The attacks occurred every month or two, lasted 3 or 4 days, and were accompanied by fever but not by nausea and vomiting. There was more or less increased frequency of urination but it was not very annoying.

On account of the good function of the right kidney it was decided to try to clear up the infection and symptoms by ureteral catheterization and pelvic lavage with silver nitrate. The treatments were given in the outpatient department.

In July, 1922, the urine from the right kidney was free from infection. On Aug. 15, 1922, the urine from the right kidney contained pus and staphylococci and there was tenderness over the kidney behind and in front. The kidney could not be palpated on account of a large abdomen and some right muscular rigidity of the abdomen.

Treatments were not carried out systematically and the patient did not improve. Jan. 13, 1923, she came into the Hospital for another examination. She still had a staphylococcus infection of the right kidney. A pyelogram showed the right kidney pelvis and calyces greatly enlarged, having a capacity of 60 c.c. or more and a dilation of the right ureter. The bladder urine still contained colon bacilli.

A pelvic examination showed a well advanced pregnancy and an X-ray examination demonstrated a seven months pregnancy.

Although the patient is still having a good deal of discomfort in the right side it seems advisable to wait until after the pregnancy before attempting any radical procedure for the relief of the trouble in the kidney.



Fig. 3 (Case 2) Recumbent position—Right pyelo-ureterogram. The ureteral stricture is clearly seen below the sacroiliac joint with the catheter extending up to it. Above the ureter is dilated. Opposite the lower part of the third lumbar vertebra a slight irregularity in the course of the ureter is seen with a filling defect, while above and below the ureter is well filled. This is seen also in Fig 4.

Remarks: The cause of the dilation of the pelvis and ureter has probably been for the most part the obstruction produced by pressure on the ureter during the seven pregnancies and long drawn out deliveries. Though the dilation is extensive, the kidney function is practically normal, suggesting an intermittent obstruction rather than a long continued one where the kidney function would have been more or less permanently impaired, even though the kidney pelvis were extra renal as it is seen to be here.

CASE NO. 2.

Grady Hospital No. 25,824.

Mrs. G. G. 28, Married, Bookbinder, American.

Admitted January 3, 1923.

Complaint: Pain in right side over the kidney, which radiates to the bladder.

F. H. One brother had tuberculosis of the larynx. One aunt died of cancer of the breast. Mother had three miscarriages.

Marital: Married six years. Separated for three years now. Three miscarriages, one stillborn, and one lived only thirty minutes. She was swollen all over during the last pregnancy.

Menstrual: Began at thirteen years old, regular, every twenty-eight days; profuse, duration four to eight days. Pain during menstruation quite severe, located in the lower abdomen and radiates to the back.

P. H. She has had a good deal of sickness, no complications. Pneumonia at seventeen (1912). Flu in 1919. Says she had tuberculosis of throat but was operated upon, the "lining" was removed and she got well.

Three years ago was operated upon for a rectal



Fig. 4 (Case 2) Semi-erect position. The pelvis is opposite the third lumbar vertebra instead of opposite the second as in Fig. 3. The stricture is well seen and the irregularity in the filling and course of the ureter is much more marked than in Fig. 3.

astula and at the same time lacerations of the cervix and perineum were repaired.

About five months ago (Aug. 4, 1922), she had an attack of severe pain in the right side. At first the pain seemed to be all over the abdomen, but eventually became most marked in the right side of the abdomen. She thought it was pain from gas when it started. She went to the Hospital, and in ten days she was much better and was then operated upon. The Hospital records show that the urine contained (Aug. 5, 1922) a few pus cells, and much mucous; it was fairly clear, acid, specific gravity 1035.

The day after admission (before operation) the temperature rose to 101 (pulse 104, respiration 28). The next day the highest temperature was 100, and from then it was normal until after the operation (Aug. 14th, 1922).

The post operative diagnosis was subacute appendicitis, with rupture. An appendectomy and right salpingo-oophorectomy were done.

The pathological report shows "Ovaries large, cystic, and showing evidence of an inflammatory process. The tubes show some change. Appendix large and much fat tissue. Microscopic examination: Sections studied of the ovaries show a marked cystic degeneration and some inflammatory change. No study of tubes and appendix. Diagnosis: Cystic degeneration of ovaries."

The post operative notes show that the wound was infected and drained a good deal until it closed on the 25th day.

After operation she had a good deal of pain in the right side and lower abdomen with occasionally some fever. She went home on the fortieth day (Sept. 23, 1922) but returned in two days (Sept. 25, 1922) with a severe attack of pain in the lower right side and in the back over the kidney. There was also nausea and vomiting. The temperature was 102, pulse 128 and respiration 26, but the urine contained

many pus cells and some red blood cells. The temperature became normal in a few days.

On October 3rd she had another attack of pain in the right back and lower abdomen, with fever and vomiting. She was then more or less sick until October 14th when a laparotomy was done. Urinalysis that day showed numerous pus cells. Wassermann negative. The Hospital records show "Exploratory laparotomy. Caecum bound down to right corner of uterus at point of removal of tube. Some of the coils of the intestines bound down in the pelvis. Caecum was found in a normal position. Gall bladder palpated and many stones felt. Not disturbed."

The recovery after operation was satisfactory and the condition much improved.

P. I. For five years she has had some pain beginning in the right back over the kidney and radiating to the bladder. It has been worse since the last operation—for about two and a half months. The pain is not so bad when lying down but distinctly worse when on her feet. The right leg gets numb at times. There has been some increased frequency of urination since the trouble started nineteen months ago. She now voids three to four times at night and too frequently during the day.

Examination: Two operative scars in the lower abdomen, one in the midline and one parallel about two inches to the right. The right side of the abdomen is a little more rigid than normal, but the right kidney can be felt. It is a little larger than normal, and very tender. On sitting it descends entirely below the twelfth rib.

Urine cloudy and contains some pus and a large number of staphylococci.

Cystoscopic examination and ureteral catheterization, pyelo-ureterogram, right.

The cystoscope showed the bladder to be fairly normal, the right ureteral orifice pouted and enlarged. Left orifice normal. On the right a ureteral catheter No. 5-F met an obstruction through which it would not pass. An X-ray catheter was passed to this point and 15 c.c. of a 20% solution of sodium iodide injected. Two exposures made. One with patient lying, a second in a semi-erect posture. Description of plates:

Plate No. 1: Shows the kidney pelvis lying about opposite the transverse process of the 2nd lumbar vertebra, with rather normal looking outline. The calyces are also about normal. In the lower part of the ureter is a very definite narrowing of the lumen at the point where the catheter met the obstruction (3 cm. above the bladder). (Fig. 3.)

Plate No. 2. Also shows this, but in addition it shows the kidney pelvis opposite the third lumbar vertebra and just below the pelvis a change in the course of the ureter due to the dropping of the kidney. The course in fact is almost S-shaped instead of straight. (Fig. 4.)

Two conditions are evidently present—nephroptosis and kinking of the ureter with stricture of the ureter. The stricture is probably due to the pelvic inflammations and the operative scar.

A diagnosis of stricture of the right ureter was made and the patient was advised to visit the outpatient department for treatment.

Feb. 3, 1923. A No. 4-F catheter passed the obstruction in the right ureter. The urine obtained was uninfected and contained no pus.

Feb. 10, 1923: A No. 5-F catheter passed. Urine clear.

March 10, 1923: Some little relief from the last treatment. Complained of a wave like pain radiating from the right kidney to the bladder, where it becomes quite severe. Increased frequency of urination.

March 12, 1923: A wax tip catheter could not be passed through constriction in the right ureter.

March 26, 1923: Bladder urine cloudy and contains pus and staphylococci. The bladder is reddened about the base. The right ureteral orifice is a good deal swollen. A No. 5-F catheter would not pass the obstruction in the ureter. A catheter was passed up the left side without difficulty. Urine from both ureters clear and uninfected.

Phthalein test: 1 c.c. (6mg) intravenous. Time of appearance about three minutes on both sides. Output 20 minutes: Right 20%, Left 24%.

Remarks: It seems probable that the pain in the right back over the kidneys and in the lower abdomen was due to a nephroptosis up to the time of the operations for the appendicitis and the pelvic disturbance. Following the operations, however, the stricture of the right ureter probably developed and the kidney symptoms increased in severity.

It is hoped that the patient's symptoms can be greatly relieved by dilatation of the stricture, and she has been advised to return more regularly for treatment. If it can be relieved it may be found advisable later on to fix the kidney in a normal position by operation.

CASE NO. 3.

Admitted to Urological Service Grady Hospital, April 7, 1923.

S. W. D. 41, Male, American, Motorman.

C. C. Pain in right lower quadrant of the abdomen in the region of the appendix.

Duration 10 days.

F. H. Negative.

P. H. Acute arthritis in 1899, right knee and ankle, sick 3 months. Used a crutch. In 1901, another attack. In 1904, acute tonsillitis—tonsilectomy. 1917 passed renal calculus. He had a sudden attack of pain in the bladder and urethra and the small stone passed. Never had an attack like this before nor since. No hematuria following.

Had typhoid fever in Sept. and October 1922. No complications. Sometimes has had vague pains in the region of the epigastrium following meals. Appetite has been good, has never had indigestion. No nausea and vomiting or gas on stomach. Constipated. Denies venereal disease.

Normal weight 130 pounds; height 5 feet 8½ inches.

In July, 1922, while driving a street car, he sud-

denly pulled on the brakes to avoid a collision and immediately had a sudden sharp pain in his back on the right side just below ribs. The pain was not severe enough to require anything for relief, but continued as dull ache for three days. He had no increased frequency of urination, dyspnea, hematuria or pyuria.

P. I. March 27, 1923, while working, patient began to have pain in the right side in the region of the appendix. At first the pain was not severe, but it gradually grew worse. He remained quiet for two days but when he did not improve, he was sent into the Hospital. At times the pain was sharp and radiated towards the groin. There was no accompanying urinary disturbance, nor blood in the urine. The urine was normal except for a few granular casts. On admission the temperature, pulse, and respiration were normal. The patient was very thin and the ribs stood out prominently. The chest was unusually long. Abdomen was slightly more rigid on the right side than on the left and there was some tenderness in the appendix region. However, palpation revealed the kidney lying in this region; it was not enlarged, only slightly tender and could be pushed back beneath the ribs.

Pyelo-ureterogram (pelvic capacity 8 c.c.) showed a pelvis lying opposite the fourth lumbar vertebra and the lower part of the pelvis and upper ureter seemed to be unusually intimately attached to the lower part of the kidney. (See operative note.) The calyces and pelvis were otherwise normal. (Fig. 5.)

12th April, 1923: Operation: Suspension of the kidney. Gas-oxygen anaesthesia.

A loin incision was made and the kidney easily exposed. It was found lying quite low in the abdomen, and was freely movable. There were a few adhesions about the upper part of the ureter and the pelvis, which seemed to fix these organs more intimately than usual to the kidney. They were freed and the kidney stripped of all its attachments so that it could be placed beneath the eleventh rib without difficulty. There it was fixed by the Kelley method employing three fine silk ligatures. Since the twelfth rib was only rudimentary the upper silk suture was run through the muscular tissues at about the point where the rib should have been.

June 1st, 1923: Patient was in bed for three weeks and since the operation he has had no discomfort. He seems to be entirely well and the kidney has remained in the position in which it was fixed. Urine uninfected.

CASE NO. 4.

Grady Hospital No. 15,877.

J. M. C. Male, 41, widower, carpenter, American, admitted Jan. 21, 1923.

Complaint: Aching pain in back over left kidney; radiating pains from back of left kidney to testicle and marked hypersensitiveness of skin of back over left kidney region.

F. H. No tuberculosis.

Connubial: Married twice; both wives died. First wife developed tuberculosis of the lungs after Flu and lived only two years. Died two years ago. Children; one by first wife, age nineteen, living and well. One died of pneumonia at six months old.

F. H. Was never very strong. Height six feet, normal weight 135 pounds. Heaviest 140 pounds. About 110 after Flu in 1918. "Typhoid fever" at ten years old and since then has had a chronic cough. For twenty years has been told by physicians that he has pulmonary tuberculosis but none could find the organisms in the sputum.

About eleven years ago (age thirty) had pneumonia with left sided pleurisy. Sick two months. Again about five years ago after the Flu (1918-1919) both lungs involved and had pleurisy on the left side again; was sick two months. Again about eighteen months ago, only a mild attack, however.

During an attack of coughing ten or eleven years ago when returning home one evening from work he suddenly spat up about a teacup of blood. No blood before then or since.

About five years ago had what he thought was malarial fever. Was sent to a hospital and they took out his appendix. He had been having some aching in the appendix region which was noted most when he was jolted, but no acute attacks of pain. The operation did not relieve the occasional discomfort and now he says there is a sharp pain at times without being jolted.

P. I. Four years ago, very shortly after the attack of Flu and pneumonia, he began having an aching pain in the lower part of the left chest; near the costal margin and about in the midclavicular line. It seemed to go all the way through to over the kidney region behind, was more or less constant, and on coughing or taking a long breath, it was quite sharp.

This gradually grew worse and kept him awake at night. He could not lie on the left side and when he turned on that side during sleep was awakened by the pain.

With the beginning of the pain there appeared an increased frequency of urination which was, at times, quite annoying. At night 4-5 times and sometimes while at work in the day every 15-20 minutes if he drank much water. No other urinary symptoms were present except at times some burning in the bladder after urination. He never noticed any mucous or blood in the urine and does not remember that it was ever cloudy.

About two and a half years ago one of the many physicians who saw him said he had an abscess on the left kidney. He went into the Grady Hospital and records show that he was carefully examined and nothing of importance was found except an old pulmonary tuberculosis. The urine was clear and negative, but for a few hyaline and granular casts. A 'phthalein test (1 c.c.) (6mg. intramuscularly) gave an output in one hour of: right kidney, 20%; left kidney, 32%.

On account of the pain and an indefinite shadow



Fig. 5. (Case 3.) Right pyelo-ureterogram. In the above illustration the pelvis does not show. The upper and middle calyces are seen. The pelvis lies opposite the 4th lumbar vertebra.

found in an X-ray examination of the left kidney region, an exploratory operation was done with nephrotomy and needling of the kidney but failed to show anything abnormal.

The operation gave him some relief for 4-5 months, but then after doing an overhead job of painting he felt a soreness and swelling in the back over the kidney region. The swelling was quite prominent, and felt as large as his two fists. He was in bed ten days and the pain and swelling gradually grew better but after this he noted a throbbing pain in the kidney region behind, especially on exertion and the skin over that area was quite sensitive and pained him when it was touched or pressed upon.

About sixteen months ago, without apparent cause, he began having some pains which radiated from the left kidney region behind to the left testicle. Never very severe, but he was sometimes nauseated. No vomiting. They recurred at irregular intervals but did not grow much worse than they were at first.

On admission to our service in January 1923, all these different pains and the increased frequency of urination were still present.

The urine was clear and negative except for a trace of albumen. There was no fever but an old pulmonary and pleural tuberculosis which seemed inactive enough to permit a gas-oxygen anaesthesia, if necessary.

In the lower left part of the chest, the X-ray shows numerous calcified areas, from 0.5 to 1.0 cm. in size, but there were no shadows in the kidney region.

The abdomen was held a little tense on the left side, but the lower pole of the kidney could be palpated from in front. There was so much tenderness behind that he would not allow any examination requiring pressure. The skin over both sides of the old kidney exploration wound was very hypersensitive—covering an area of about twelve centimeters, which lay below the eleventh rib and outside the sacro-spinalis



Fig. 6. (Case 4.) Left pyelo-ureterogram. The catheter tip is in the pelvis of the kidney. Opposite the upper part of the third vertebra the ureteral filling ends rather abruptly. Otherwise the ureter and pelvis seem normal. The kidney position is about normal.



Fig. 7. (Case 4). The same as Fig. 6 with the catheter tip withdrawn to the fifth lumbar vertebra. The termination of the filling in the upper ureter is now very easily made out. The lower ureter is not injected but a good deal of the solution has run back into the bladder. A second set of pyelo-ureterograms demonstrated this same abnormality.

muscle. The area in which the throbbing pain was felt was about seven centimeters in diameter, occupying the midpart of the sensitive area and the tissues beneath were unusually relaxed. Pressure here caused a good deal of pain, but no throbbing could be felt. The scar of the old incision ran almost across this area, and it is interesting to note, the hypersensitive area lay on both sides of the scar.

Both of the twelfth ribs were about half their usual length and the scar of the incision passed above the tip of the left one. Cystoscopy and ureteral catheterization showed no abnormalities. 'Phthalein (1 c.c.) (6mg. intravenous) test: Appearance time $3\frac{1}{2}$ minutes on both sides. Output R-20% L-18%, 20 minutes.

Pyelogram. The X-ray catheter extended well into the pelvis of the left kidney, which was well distended with sodium iodide. The calyces were delicate and cupping was quite evident. The pelvis was normal in size and shape. However, the upper part of the ureter for about three centimeters below the pelvis was distinctly dilated. The shadow which was about six tenths of a centimeter wide terminated rather abruptly. (See Fig. 6.)

Plate 2: Showed abrupt termination of the shadow much better for the end of a catheter had been withdrawn into the lower ureter to the level of the transverse process of the fifth lumbar vertebra. Only a fine line of shadow scarcely two-tenths centimeters in diameters connected the dilated part of the upper ureter and the tip of the catheter. The position of the pelvis was about normal but the upper part of the ureter ran downwards and somewhat outward. At the point where the dilatation stops it started inwards again. (See Fig. 7).

Pyelograms were done a second time and these abnormalities were reproduced exactly.

Though this construction of the ureter was quite

definite and the pain produced by dilating the kidney pelvis was the same as that of which he complained an operation was undertaken with hesitancy on account of the tuberculosis of the lungs. The patient, however, was so insistent that something be done for him that it was decided to try to operate under local anaesthesia.

Operation Nephrectomy—17th Feb. 1923. Begun under local anaesthesia, finished under gas-oxygen. By Drs. Boyd and Floyd.

Novocaine solution (0.25%) was injected as usual in kidney operations where local anaesthesia is used. Incision made in the line of the scar of the former operation, though not starting so high as the scar of the former operation, which passed above the tip of the short 12th rib. The kidney was easily exposed and no difficulty was found in freeing the lower pole from the surrounding tissues, but on passing the finger around the kidney in the mid-part, an obstruction was met consisting of very strong adhesions between the kidney and the surrounding tissue. An effort was made to tear this loose and immediately severe bleeding began from the convex surface of the kidney, which was only controlled by pressure on the pedicle. The patient was immediately anaesthetized with gas-oxygen and the separation of the kidney completed. This stopped the bleeding almost at once. The upper part of the kidney was also rather adherent.

Along the ventral portion of the pelvis there were slight, but distinct adhesions which seemed to attach the pelvis unusually firmly to the kidney. This was not so marked on the dorsal surface. The ureter just below the pelvis and lower part of the pelvis seemed to be unusually injected with blood when inspected with the kidney drawn into the wound although the ureter did not seem to be under unusual tension. Lying just below beginning of the ureter several very distinct fibrous bands could be felt which when pulled

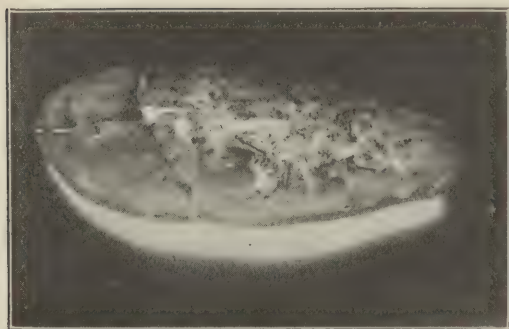


Fig. 8. (Case 4). The kidney removed after Figs. 6 and 7 were made. The marked irregularities on the convex surfaces can be well seen. This was where the kidney was very adherent to the surrounding tissues.

drew the ureter somewhat out of the proper position. In freeing the lower part of the pelvis and the upper part of the ureter several small vessels running to the ureter were torn and a considerable amount of bleeding occurred which had to be controlled by tying. It seemed better under the circumstances to take kidney out. The character of the lesion on the convex surface of the kidney (Fig. 8) seemed doubtful (possibly tuberculous) and the patient was not a suitable risk for repeated operations.

14th April 1923: Patient left the hospital in 15 days after the operation. Recovery uneventful. Pain and increased frequency of urination stopped almost immediately after the operation. He does not void now at night and there are no pains in the side at all except over the lower ribs in front from the old pleurisy. Urine is clear and negative except for the slight trace of albumen.

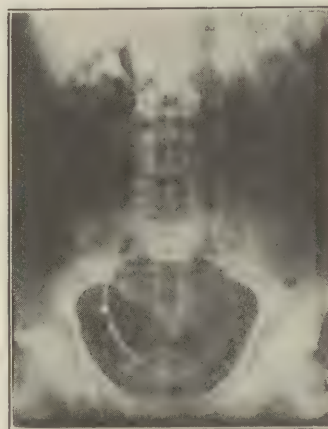
CASE NO. 5.

J. B. G. Male, 49, married, American. Worker in the U. S. Volunteers of America.

I saw the patient first in January, 1922, when he was suffering from an attack of pain over the right kidney behind and passing blood and occasionally small blood clots in the urine. The clots were not cylindrical. The attack had begun ten days before and had continued with only slight remissions and was worse than any he had had.

His first attack (the beginning of his P. I.) was in July 1920. The next Aug. 2, 1921, and the third was the one beginning December 1921. While under my observation he had eight or ten more of the attacks.

The attacks of pain which he had were all very similar. During and following them there were no symptoms like a foreign body in the bladder, urethra or rectum. He nearly always vomited. Before the pain began he was always very nervous for about an hour. At the end of that time the aching began over the kidney behind and persisted until the attack was over. Occasionally the blood appeared shortly after the nervous spell started and preceding the appearance of the pain. Occasionally the nervousness passed off without the bleeding or pain but at no time did the pain fail to appear if he had the nervousness and the



Figs. 9 and 10. (Case 5). Recumbent position, show an almost normal kidney pelvis (right). The left side was not injected in Fig. 9 but was in Fig. 10. The kidney pelvis is opposite the second lumbar vertebra, while in the semi-erect position it is opposite the fourth and fifth vertebrae. The radiogram of the semi-erect position was not clear enough to give a good photograph, although the lantern slide was fairly distinct, so it is not shown here.

bleeding also. He had several attacks of pain without bleeding. Usually the bleeding appeared shortly after the pain started, about 30 minutes. Just before it appeared he had a sensation of something like a bubble of air starting in the kidney region and passing downward to the bladder and then to the glans penis. This was followed by a sudden desire to urinate and the urine then usually contained blood, but not always for sometimes neither clots nor blood were found. Blood was rarely seen in the urine for more than two voidings—for more than an hour.

The pain always radiated to the bladder—then to the glans penis. At first the radiations were distinct, later the pain became generalized. The attacks lasted for 2-3 hours, and sometimes recurred in a few hours keeping him in bed for several days. Pelvic catheterization does not give relief. The soreness in the kidney region after attacks was always quite severe.

The only cause for the attacks of pain which I



Fig. 11. Case 6). Left pyelogram. Before operation. The double ureters in this case are seen in Figs. 12 and 13. Here the catheter is seen extending a little above the crest of the ilium and above it several poorly outlined, rounded shadows and below them a larger and less clearly outlined shadow.

found was ureteral catheterization—and that happened nearly every time it was done unless he was already suffering with an attack.

Numerous cystoscopic examinations were made—ureteral catheterizations, functional tests and pyelograms (Fig. 9 and 10). In May I did a Caulk Punch operation removing a median bar and producing a noticeable relief from an obstruction to urination which he had had all his life but not affecting the attacks of pain. The right pelvic capacity was about 15 c.c. The kidney function was much impaired by the attacks, falling at one time to 2½% while at its best it was 18% (1 c.c. 'phthalein, intravenously collection 20 minutes). The time of appearance varied in the same manner—at the best 2½-3 minutes.

Coagulation time of blood was 5-6 minutes. A Guinea pig inoculation with urine was negative for tuberculosis. An infection of the right kidney urine was found very frequently with however only a little pus, but the infection was absent during two or more of the attacks.

In 1912 he had a ruptured appendix and subsequently a number of operations to drain collections of pus in the appendix region. He at that time had a bladder infection due to catheterization which cleared up in time.

Here good cause was found to suspect a ureteral stricture, so I passed an 11-F wax bulb on a ureteral catheter and found no tightness except at the ureteral meatus. However there was a distinct pain produced at the uretero-pelvic juncture, and also, as the catheter was withdrawn, beginning at 15cm. from the ureteral orifice. The pain produced by pulling the bulb out of the ureteral orifice was quite acute. I repeated this several times with the same result each time. To indicate the seat of the pain produced all along the ureter he put his hand over the lower part of the abdomen.

There were three angioma on the mucosa of the lips which appeared shortly before his kidney disturbance began and I felt that he might have develop-



Fig. 12. (Case 6). After operation. A catheter in each of the double ureters. The catheter to the left was injected with 24 c.c. of solution, some of which can be seen passing down the ureter about the catheter. Note the calyces extending from the upper part of the shadow. Nothing of the upper part of the kidney is seen though the solution has run back into the bladder.

ed similar changes in the mucosa of the kidney.

Though the kidney could be felt to possess greater mobility than normal it could not be determined by palpation that it descended sufficiently to cause his attacks. He was quite a large man and though lacking a pendulous abdomen he had much more than a normal amount of subcutaneous fat, and examination by palpation was not satisfactory. The pyelograms which were made showed an almost normal kidney, about in a normal position.

The occurrence of the blood in the urine and the production of the attacks of pain by ureteral catheterization were both confusing.

Nearly all the work done on the patient was performed on the charity service of the City Hospital and since no apparatus was available for taking X-ray pictures in the upright position this one thing had been neglected. However in November, 1922, we devised a method of doing this and an exposure made with the patient standing and 10 c.c. of sodium bromide solution injected through the ureteral catheter gave almost astonishing results. The kidney was found lying with the lower pole overlapping the ilium and its pelvis was at about the level of the fourth lumbar vertebra. (While the lantern slide shows this the photograph of the radiogram does not—the radiogram is very poor.)

Under gas-oxygen anaesthesia a suspension of the kidney was done by Dr. Earl Floyd in December, 1922, by the method devised by Howard Kelley. Though there was some infection of the wound (very probably from the infection within the kidney) the recovery was good and the patient was discharged on the 16th of January, 1923.

March 15th, 1923: Patient has been free from pain since operation. He feels that he has been relieved of the condition which was causing his troubles. Urine uninfected.



Fig. 13. (Case 6.) The same as Fig. 12 with 5 c.c. of solution injected through the catheter in the other ureter. There is evidently no connection between the upper and lower parts of the kidney.

CASE NO. 6

Grady Hospital No. 12374.

J. W. S. Male, 37, married, shoemaker, American. Admitted May 8, 1922.

Complaint: Discharging sinus from the left kidney.

F. H. Negative.

P. H. Almost entirely irrelevant. In 1914 he had a very mild attack of gonorrhoea without complications. Always in good health except for trouble with left kidney. Had "Typhoid fever" at nine years old. Many people were then sick with it, and his father died from it at that time. Before getting up after the fever he began having an aching pain in the left flank, which continued for three to four weeks and made him uncomfortable, but not severe enough to keep him in bed. There were no urinary symptoms present and the trouble gradually disappeared.

At twenty-two (in 1907) the pain in the flank returned and grew gradually worse for about a week. He then went to a hospital and after three weeks, was operated upon and an abscess of the left kidney drained. He grew very ill before he was operated upon, and had a high fever and some chills. The pain was very severe and localized over the kidney, in the left side and behind. He does not remember having any urinary symptoms.

The wound healed in about two months and he was seemingly all right until two years later (1909) when he had another attack just like the first. In five or six days the abscess was opened by operation. The wound healed in about two months. The same condition recurred in 1910. In 1911 another similar abscess broke open and the opening was enlarged later by incision. The wound healed in three months and remained closed for about two years, when it broke open again and for



Fig. 14. (Case 7). Left ureterogram. The ureteral outline is seen below the sacroiliac joint extending up to the lower part of the fourth lumbar vertebra. The upper ureter and kidney pelvis could not be injected.

the first time began discharging urine. He thinks about a pint a day was passed for about two years, when he had an attack of flu and the discharge became thick and purulent. Up to the time of his admission (for about six months) the discharge was thick and of an unpleasant odor and he had occasional rises of temperature and felt badly.

Throughout the trouble with the kidney, he was free from symptoms of lower genito-urinary disturbances and passed no blood or stones with the urine.

Physical examination on admission was negative except for the discharging sinus in the left flank, where there were also the scars of the previous operations performed to drain the abscesses. An indefinite mass could be felt in the left side of the abdomen extending from the level of the anterior superior spine upward. It moved on respiration, and was not particularly tender to pressure. The bladder urine was almost clear, but contained a few pus cells and some bacilli morphologically like colon bacilli.

Cystoscopic examination showed a fairly normal bladder, except that there were two ureteral orifices on the left side—one normally situated, the other at the juncture of the ureteral ridge and trigone. Neither was seen to function. On the right only one orifice was present which was situated in the normal position and functioned normally.

Ureteral Catheterization: Urine from the right side normal.

'Phthalein output 22 per cent for 25 minutes (6 mg. I. V.) Time of appearance, four minutes.

On the left side no 'phthalein or urine was obtained from either catheter in thirty-five minutes. The catheters could be passed up the left ureters only about ten centimeters and on injecting 30-40



Fig. 15. (Case 7). The same as Fig. 14, showing however the bladder outline and lower ureter to demonstrate that a large amount of solution was injected in an attempt to pass some into the kidney pelvis.

c.c. of fluid into either one there was a discharge of purulent material from the sinus over the kidney.

Pyelograms were then made but only one catheter was injected since the sinus seemed to connect with both ureters. Five cubic centimeters of sodium bromide solution gave a rounded shadow about 6 cm. in diameter lying about 5 cm. above the tip of the catheter. The tip lay 3 cm. above the pelvic brim and a thin line of shadows extended from it to the large shadow. With 15 c.c. of the sodium bromide solution injected, shadows which looked like the dilated calyces of the kidney could be made out, lying below and to the left of the rounded shadow seen in the other plate. (Fig. 11).

The pre-operative diagnosis was: double kidney, left; and double ureters, left; with nephroptosis and pyelonephrosis. Extensive adhesions were expected to be present on account of the numerous abscesses which he had had and the frequent operations which he had undergone.

May 20th, 1922; Dr. Boyd.

Operation Nephrectomy, Gas-Oxygen Anaesthesia.

A loin incision was made, going well down toward the anterior superior spine. The fistula was encircled and the opening clamped and an attempt made to dissect out the tract and sac without opening it, but this was unsuccessful. The kidney lay almost immediately beneath the muscles and in the position shown in the pyelogram.

It was necessary to use the scissors to free the kidney from the surrounding tissue, so the dilated pelvis and the calyces were emptied of the thick, greenish, purulent material, which was found and the kidney removed by dissection. No large vessels were seen and the pedicle of the kidney was not definitely located. In the region where I thought the pedicle should have been, I found it necessary to leave some kidney tissue which did not seem possible to remove without danger of injury to the aorta, so sutures were placed through this part of the kidney and tied off with the idea of catching any large vessels which might lie there.

Patient's pulse was rapid when the operation began and remained rapid throughout the opera-

tion. Toward the last the anaesthetist thought his condition demanded haste and the wound was immediately closed with through-and-through sutures of silkworm gut. Two large tubes were placed leading down to the stump of the kidney and ureters and a piece of iodoform gauze along with them. Patient stood the operation fairly well.

He was discharged from the hospital on the 31st day, a small drainage tube being left in the wound. There was some drainage, but the urine was clear in the second glass.

April 13th, 1923:

The wound has been healed seven to eight months. No pain in the side except following a cold which he had a week ago, when there was a little pain on the left side in the kidney region.

Urine examined at that time showed a good deal of pus and bacilli like colon, but cleared up immediately on taking urotropin; it is now free from pus and evidence of infection and inflammation.

On the 12th of April, 1923, a pyelogram was done again on the left side. Both catheters were injected, the first with 24 c.c. of sodium iodide and the second with 5 c.c. of sodium iodide, which seemed to produce a sharp discomfort more marked than the injection of the large quantity. The plates showed the following:

No. 1 (Fig. 12) shows an injection of the lower pelvis of the kidney, made through the catheter which leads to that part. Twenty-four cubic centimeters of sodium iodide were injected and the X-ray plate shows that some ran back into the bladder. The pelvis is almost cylindrical and a well defined calyx lies above it. No. 2. (Fig. 13) Only five cubic centimeters were injected into the upper part of the kidney through the other catheter and the X-ray shows no pelvic outline, but a few well defined calyces. The pelvis may lie behind the pelvis of the lower part.

CASE NO. 7

Grady Hospital No. 10950.

R. L. P. Male, 51, married, butcher, American. Admitted November 28, 1921.

Complaint: Blood in the urine.

This case is of interest because when an injection of opaque solution was made into the left ureter it was found in the X-ray plate that the fluid only reached to a point in the ureter well below the kidney. Most of the large quantity of solution flowed back along the ureter into the bladder.

The present illness began about 1917 with an attack of pain in the left kidney region behind, radiating to the groin. He passed some blood in the urine and from then on the attacks recurred at gradually shorter intervals, always with blood in the urine and sometimes clots. Occasionally blood was seen in the urine without attacks of pain. There were no attacks of chills and fever to suggest an infectious process. Examination showed a large mass in the left side which was firm,

smooth and moved on respiration and was not very tender to pressure.

X-ray showed nothing of importance. The bladder urine was quite bloody but not infected.

Cystoscopic examination: The bladder was practically normal and free from tumors. Bloody urine was seen to be coming from the left ureter. The right ureteral orifice and the urine coming from the right side through a ureteral catheter were normal.

A ureteral catheter was passed twenty centimeters up the left ureter. There was no flow from it except on pressure over the kidney region when a small amount of quite bloody urine was obtained which was uninfected.

Pyelogram, left: Sixty cubic centimeters of a 25% solution of sodium bromide were injected through the ureteral catheter without producing any discomfort except a burning in the bladder. An X-ray exposure made showed that the solution went a little way beyond the catheter (Fig. 14) and returned along the ureter to the bladder (Fig. 15).

A diagnosis of malignant tumor of the kidney was made, but on account of the patient's poor physical condition and because the hemoglobin was only 35% (red blood cells 2,800,000) operation was deferred until the patient could be transfused. This was done three times by Dr. S. A. Folsom, and the hemoglobin brought up to 46%.

No metastases could be demonstrated by physical examination or the X-ray though it was natural to believe that they existed.

Feb. 4, 1922, Nephrectomy—Gas-Oxygen Anaesthesia. Dr. M. L. Boyd.

Through a loin incision a large mass about thirty-five by twenty-two centimeters was found which was evidently a greatly enlarged kidney. Since it was tense, smooth and seemed to contain fluid it was punctured and found to be a thin walled sac full of bloody urine.

When the uretero-pelvic juncture was reached it was found that that part of the ureter was greatly thickened and quite firm for about three centimeters which explained why the injection of the pelvis from the ureter was impossible.

The kidney and as much of the ureter as possible was removed and it is interesting to note that at no point were definite adhesions found about the kidney and upper ureter.

The recovery was uneventful.

In May, 1922, the patient again passed some blood in the urine and returned for a further examination. Cystoscopic examination showed a small papillomatous growth in the left ureteral orifice and several small papilloma at other places.

With the idea that the ureter might be the seat of a papilloma from which the bladder growths were springing—an extraperitoneal ureterectomy was done after a careful X-ray examination disclosed no metastases in the bones or lungs. The ureter was found to contain only several small papillomata.

Subsequently, however, he died of a carcinomatosis, the most annoying metastasis being in the left ileum.

DISCUSSION ON THE PAPER OF DR. EARL FLOYD

Dr. H. Y. Richton, Savannah—I think Dr. Floyd is to be congratulated on his excellent paper and exhibition of plates. He went pretty much into detail as regards the value of this important method of diagnosis, and I must say that without a ureterogram in many cases in which I have employed it I could not have made the diagnosis. I have found it of considerable importance in certain ureteral stones or calculus of the kidney. We find the triple phosphates or other urinary salts show a shadow which is either indistinct or is not shown by the x-ray.

Thorium can be injected into the pelvis and by allowing it to drain off we can create such deposits of thorium on the stone as to make a diagnosis of calculus that could not have been made otherwise.

There is some danger to this procedure. I recall a case of pyelitis at the post graduate hospital where it was done, and they were using then the syringe method, and by making the injection under too great pressure the pelvis was ruptured. This method should be employed in my opinion by the gravity plan, by elevating it a foot or more, using sodium bromid, or whatever you may use. It is not only important to make a diagnosis of calculus, where the x-ray is of no great assistance, but I believe you eliminate the unnecessary nephrotomy so oftentimes done that you are dealing with a calculus in the pelvis of the kidney. Pyelotomy is an easier procedure and it certainly does assist the patient in getting out of bed earlier. There is less pain and it has many other advantages. There are several cases of papillomata as well as hypernephroma that could only have been diagnosed by uretero-pyelograms.

There is a great deal to be said as to the value of this procedure, but I will not take up any more of your time except to say that I agree with Dr. Floyd in all he has said, that this is a very important procedure in the diagnosis of kidney lesions.

TREATMENT OF ENCEPHALITIS

For more than two years Ross Moore, Los Angeles (Journal A. M. A., September 15, 1923), has been treating certain patients showing symptom groups referable to the basal ganglions by injecting intraspinally their own blood serum, either straight or inactivated. Twelve or fifteen cases of chronic paralysis agitans have been treated by this method. In more than half these cases, improvement occurred, temporary in nature, but of a quality different from that seen in the course of other treatment. This improvement has been usually in the nature of muscular relaxation. Relief from tremor has

not been marked. All patients having a well developed tremor of long standing continued to have it even though very great muscular relaxation was secured. There were several cases of very acute encephalitis in which the progress was apparently uninfluenced by the injections. There appeared to be overwhelming infection, as if the protective mechanism of the body was not functioning. Rosenow's experimental antiencephalitis serum was used in half a dozen cases. In four cases it was given intravenously twenty-four hours before blood was taken for intraspinal use. In the other two it was given intraspinally. Although results were negative, the efficacy of the serum is not disproved thereby, because the cases treated were very extreme ones. In the present state of our knowledge we are unable to say just when nerve cells that are being attacked by infectious disease or toxic processes die. They may be poisoned and inactive functionally a long time before they actually die. If they are inactive functionally, their inactivity will give rise to the same symptoms as their later death. Functional inactivity anywhere in the body is amenable to treatment. Therapeutic effort in the immediate future should be along two lines: (a) an increase in the antitoxic qualities of the blood serum used for injection, and (b) application of the serum more directly to the seat of the trouble.

MULTIPLE STAGE MEASURES IN THE MANAGEMENT OF SEVERE HYPERTHYROIDISM*

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There is probably no class of patients which taxes the judgment, ability, and patience of the surgeon more than do those who suffer with the exaggerated type of hyperthyroidism. Unfortunately more than fifty per cent of these patients are physically unfit for thyroidectomy when they come for surgical relief. Fortunately, however, we have available a number of less radical measures which, if properly applied, may be utilized to bring patients of this type

into a zone of comparative operative safety. It is of these measures which I wish to speak especially.

Ligation of Thyroid Vessels

Ligation of the thyroid vessels was used by veterinary surgeons to control goiter in horses (Crotti) long before it was utilized as a therapeutic measure in human goiter surgery. The first attempt to ligate the superior thyroid artery in man is said to have been made by Blizzard in 1813. The patient died of hemorrhage. About one year later the operation was successfully done by Walter. It is reported that Porter did the first ligation of the inferior thyroid artery in 1852. Literature tells us, however, that this procedure was not definitely established as a therapeutic means of controlling goiter until the latter part of the eighteenth century. The hope of ligation of one or of four thyroid arteries having any permanent beneficial effect in severe hyperthyroidism is no longer held; its greatest good being only one of several important factors which contribute to a successful thyroidectomy.

Just how the beneficial effects from ligation are produced is not definitely known. Formerly it was thought that the improvement was due principally to a diminution of blood supply of the thyroid gland, but recent investigators have shown by a detailed study of its blood supply that the various anastomoses are sufficiently numerous to bring about the re-establishment of the circulation in the parts ligated, within a period of about ten days. Further proof that factors other than the mere alteration of blood supply to the gland contribute to the improvement, is found in the fact that the inferior thyroid arteries supply about two-thirds of the entire gland, and that following ligation of these vessels the improvement is far less marked than is true when the superior vessels are ligated. On a basis of these findings Mastin of the Mayo Clinic is inclined to believe that equally as much good comes from the alteration of nerve and lymphatic supply, which structures are included in the ligation, as seems to come from the change in blood supply. The difference in the beneficial effects following ligation of the superior and inferior vessels, he thinks is explained in the fact that fewer nerve and lymphatic trunks enter the gland with the inferior

thyroid arteries than is true of the superior arteries. This opinion seems now to be shared by the majority of men throughout the country who have had an extensive experience in thyroid surgery. Because of the above facts we select for ligation the superior thyroid arteries. And while there is some difference of opinion as to whether the vessels should be isolated and tied alone, or whether it is better to include in the ligature the superior pole, it would seem that the best results would follow polar ligations just at the point of entrance of the arteries into the gland.

As to the suture material to be used is ligation, it seems to matter little whether it be silk, linen, or chromic catgut. Cutting or crushing the tissue between ligatures, likewise makes little difference.

Ligation of the inferior thyroid arteries is becoming rapidly more popular in those patients where ligation of the superior poles is not followed by sufficient improvement to do safely a thyroidectomy. If it becomes necessary to ligate these arteries it is probably best not to tie the vessels on both sides at one time, since there is some danger of necrosis of both the lower thyroid poles and parathyroids.

The indications for ligation are too numerous to detail in the short space of time allotted this paper.

Briefly we may say that one should ligate if any real doubt is entertained as to the patient's ability to stand a more radical measure. Even after a painstaking survey of the patient's physical resources, it is sometimes necessary to reserve judgment as to the amount of surgery to be done, until we observe how the patient reacts to our pre-operative preparation.

Many hyperthyroid patients are seemingly too good surgical risks for ligation, and yet not quite good enough for the ideal bilateral thyroidectomy. If in such a patient we elect to do a complete operation, and find after the resection of one lobe the condition of the patient is such that will not permit further work, the operation should be stopped at this point, and the opposite lobe removed a month or so later. Improvement following the resection of one lobe is usually more marked than is noted following ligation. The removal of the second lobe is somewhat more tedious than is the case in the

first operation, on account of the formation of scar tissue and adhesions. We should therefore avoid, if possible, the uncovering of the opposite lobe during the primary step.

Boiling Water Injections

Boiling water injections into the thyroid gland for the purpose of controlling hyperthyroidism was first devised by Porter; the principle of his method being based upon parenchyma destruction and connective tissue formation. Porter does not advocate its use in non-toxic goiter, nor in patients with large toxic goiters who are classed as good surgical risks. Our own application of this method has been confined to patients who after ligation failed to improve sufficiently for thyroidectomy, and to a few patients whose recovery was not complete following thyroidectomy. In the majority of instances its use was followed by sufficient improvement to permit the completion of the final step in our graded operations. In one instance the improvement was so marked that the patient refused further operation, and to date has remained well.

The method is not without danger, deaths from its use having been reported by Mayo and Babcock. However, if one follows carefully Porter's directions for its applications a place for its use may be found and with good results, in the management of the more severe types of hyperthyroidism.

Roentgen Ray Therapy

In recent years Roentgenologists throughout the country have claimed much good for the roentgen ray in the treatment of hyperthyroidism. Our own use of this measure has been confined to two extremely toxic patients, neither of which showed any permanent beneficial effects following several treatments. We have, however, operated on quite a number of patients who had extensive roentgen ray therapy prior to our connection with them, and can share heartily the opinion of men of broader experience in thyroid surgery, notably Crile and Mayo, that its use adds greatly to the difficulties of operation. Since our personal experience with this method is probably too limited to express a fair opinion as to its value, we shall quote briefly the present day views of Drs. C. H. Mayo and G. W. Crile, both of whom have had ample opportunities to

know the truth about its advantages and disadvantages.

Mayo says: "With roentgen ray treatment remissions may occur just as remissions occur without treatment or with several other methods of treatment. Our experience has been failure or but temporary benefit. It is possible that the ray treatment may destroy the gland and produce hypothyroidism. It is difficult to regulate the dosage and its use adds to the difficulties of operation."

Crile makes this conclusion:

"From a study of evidence offered by those who advocate the roentgen ray treatment of hyperthyroidism and a consideration of our own experience, I am inclined to believe that the surgical treatment of hyperthyroidism combined with physiologic rest yields the most favorable results. Heretofore the only valid objection to surgical treatment has been the mortality; but now surgical treatment is undertaken in every case; the mortality is practically eliminated; much time is saved, and a more certain cure is achieved."

That the roentgen ray does produce some beneficial effect in hyperthyroidism we do not doubt; but until further evidence of its value is established we believe its use should be limited to those patients who refuse surgical treatment, and to those who are considered unsafe risks for any operative procedure.

Clinical Experience

During the past year we have studied sixty-eight thyroid patients, thirty of whom we subjected to operation. Of the thirty patients who came to operation, sixteen had exophthalmic goiter and nine of the sixteen were considered unsafe risks for thyroidectomy when they presented themselves for treatment. Among the latter number preliminary graded operations were applied as follows: Three patients had a single superior pole ligation followed within a few days by ligation of the opposite pole; four others a ligation of both superior poles in one step, and the remaining two a resection of one lobe and isthmus.

Five of these patients were brought later through a successful thyroidectomy, and are now practically well; three others who have been ligated during the past six weeks are not yet ready for the final operation, but are show-

ing the usual improvement following ligation.

One other patient, who, three months previously, had had a ligation of both superior poles, died of acute hyperthyroidism ten hours after resection of a single lobe—the only death among our thyroid patients in more than two years.

This patient presented every detail of a clear cut picture of severe hyperthyroidism. A female, age 34, weight 84 lbs., extreme exhaustion, nervousness, tachycardia, palpitation, tremor, exophthalmus, nausea, vomiting, diarrhea, fever, hypertension, and a basal metabolic rate of plus 104.

After ten days complete rest in bed she stood well the ligation of the superior poles in two steps. Three months later she had gained 19 pounds in weight, most of her exaggerated symptoms were improving and the metabolic rate had dropped to plus 66. We then did a resection of one lobe, stopping the operation at this point, not because the patient's condition was alarming, but rather on account of some doubt as to her ability to stand the hyperthyroid reaction that would certainly follow. Our doubt proved to be well founded for the patient went immediately into an attack of acute hyperthyroidism and died in ten hours. We make special comment on this case, first, for the sake of self criticism in that we subjected a patient to an operation which might possibly have been saved by the further application of less radical measures; second, because it illustrates so well the value of graded operations, and thirdly, because it shows the dangers of radical surgery when applied in such cases at the wrong time.

In mapping out a plan of procedure for these extremely toxic patients we should keep in mind the fact that each operative step, whether it be a single or a double ligation of the upper poles, a ligation of the inferior arteries, the removal of one lobe, or injection into the gland of boiling water, will in 95% of our patients better fortify them for the final operation, and in the end reward us with more favorable results than would be the case if we ignore the importance of these steps and attempt more radical measures.

Summary

1. Preliminary ligation of the thyroid vessels, including upper poles, contributes

materially to the safety of thyroidectomy in severe hyperthyroidism.

2. Boiling water injections into the gland may be utilized profitably to bring certain patients into a zone of operative safety.

3. Patients who are too good for ligation and not good enough for bilateral thyroidectomy should have a resection done in two stages.

4. The place of the roentgen ray in the treatment of hyperthyroidism is apparently not definitely established.

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PITFALLS IN THE MANAGEMENT OF THYROID DISORDERS*

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It has been said that a wise man is he who frequently changes his mind. This adage does not aver that one becomes wise merely by the mental gymnastics involved in frequent mind changing. Quite the reverse is true. Wisdom comes not by the simple process of assertive action announcing a new view, but as a result of serious study, investigation and studious application to the problem in hand, which, you will agree furnishes the worth-while cortical exercise as well as the compelling reason resulting in the change of mind.

To those in medicine who have the capacity and the courage to occasionally alter fixed opinions when acceptable data is introduced, we owe the advances which our profession makes from day to day in its capacity to render service to humanity.

The question of management in thyroid disorders is to many a closed book. Many minds have never changed in regard to the problems in-

involved in the treatment of its sundry disorders.

There are those who hold that the Lord made man subject to many ills and affirm that He should be left to care for the race as His just punishment for the error committed in creation. Such a view point, altho quite bizarre and quite foreign to this audience, is in reality the position taken by many otherwise good physicians. Others affirm that this problem belongs to the internist, or to the exponent of X-ray and radium energy. Surgical ablation of the offending organ comes in for its fair share of consideration both favorable and unfavorable. Thus responsibility is passed from one specialty to another while the thyroid sufferer pursues his course inadequately advised.

This problem should be considered with fair mindedness recognizing the fact that past results in goitre management by any exclusive method fails to justify the position that its treatment can be reduced to a question of X-ray or medicine, or surgery alone. This leads me to direct your attention to these points which appeal to me as valuable to the profession as a whole.

Disorders of this gland have been recognized in the past largely by change in bulk, which picture presents the familiar full neck seen in the advanced class of goiterous patients. By this criterion alone for diagnosis, goitre would be considered a rare disease in the Southeast. That it is extremely common becomes evident when one recognizes that symptoms from this malady do not depend upon size of the gland per se, but upon the physiological activity of its epithelial histology. We cannot go into the interesting anatomy and physiology of the thyroid so necessary to an adequate understanding of this disease, as it would lead us too far afield.

For the purpose of this paper, suffice it to say that thyroid disorders arise when some resident or ectopic influence disturbs the ability of the gland to elaborate and deliver to the blood thyroxin within the limits required by the body under varying conditions and environments.

The central point in getting a working concept of thyroid pathology, hinges upon recognition of the fact that this gland is normally unstable, both as to size and physiologic activity. It changes not only in size but in histologic

make-up and in tinctorial activity as demands are made upon it by the multitudinous requirements of the body. This concept, however, must reduce the gland's activity to certain prescribed limits, beyond which processes and activities identical with those in the normal gland, must be interpreted as pathologic.

Altho not universally accepted, disorders of this gland are thyrogenic—they arise within and are produced by changes in the gland structure—the clinical manifestations are always found in keeping with changes observed by the pathologist on microscopic study of the excised tissue. These abnormal changes appear to be dependent primarily upon iodine metabolism. Iodine deficiency in embryonic life and in childhood, certainly makes the individual susceptible to, if it does not actually produce disease of the thyroid later in life. The disorder therefore, may be said to be one of iodine deficiency. To recognize and diagnose the malady, requires first, a belief in its prevalence. We must expect to meet it and know it, not by its terminal manifestations alone, as large tumors in the colloid and adenomatous types and the classic triad of bulging eyes, rapid heart's action and trembling hands seen in so-called exophthalmic class, but by its less dramatic manifestations which long precede these terminal states.

The next point concerns what might be styled prophylaxis in goitre treatment; as in many other diseases, the opportunity for most effective treatment is often passed when these terminal manifestations are present. Although the disease begins in the thyroid gland, it does not remain localized. Thus many otherwise brilliant surgical results are set at naught by the failure of vital centers destroyed by the systemic effects of thyroid toxins long before the surgeon has a chance to shut them off by thyroidectomy.

I do not wish to be understood as advocating surgery as a panacea for thyroid affections. The family physician is privileged to render his greatest service to thyroid sufferers in the adolescent period, at which time, hypertrophy of the gland is seen—enlargements that have come about in response to more or less normal demands made at the age of puberty. All girls who present full necks at this age, the uniform

hypertrophy of adolescence, should be under medical care. Here iodine administration proves of great value in initiating the involutionary processes which reduce the gland to its normal size and activity after puberty is established. Without proper care at this critical period, many girls have fixed in their thyroid, the ground work upon which future goitres of colloid or toxic nature develops. In this connection I earnestly call your attention to another pitfall which has caused many disasters in the past, viz., the indiscreet administration of iodine to goiterous subjects without careful check upon the class of thyroid affections under treatment, or careful and frequent follow-up examinations to determine the clinical effects set up by iodine administration.

Since the earliest day of history, sea sponge was given thyroid patients, which we now know gave benefit because of the iodine content. Within the recent past, Marine and Lenhart, Department of Experimental Medicine, Western Reserve University, have reviewed the history of iodine treatment for thyroid subjects, and have apparently proven that the disease can be prevented by the administration of three grains of sodiumiodide daily for ten days in the spring and autumn of each year. This information has been eagerly appropriated by Public Health agencies; by teachers, over-the-counter prescribing druggists, and by many physicians in response to the universal interest created in thyroid affections from a prophylactic view point.

The result has been such that Bircher was able to report in 1921, thirty-six cases of thyroid derangement in patients taking prophylactic treatment. The normal content of iodine in the thyroid gland is 3 to 9 mgs. In the study of Bircher, he found among the fatal cases reported from the series, thyroids containing from 20 to 380 millograms.

In a *personal* case, Miss R. A prescription containing syrup of iodide of iron 4 oz. syrup of hydriodic acid 12 oz. was taken over a period of fourteen months, during which time four quarts were consumed. On examination, a typical exophthalmic goitre with classic symptoms was found, which had developed certainly in response to the misdirected effort upon the part of her physician.

Iodine will prevent development of goitre and will reduce and temporarily improve adolescent colloid cases, but it must be used with a recognition of its potential dangers.

A 3rd pitfall concerns the question of considering quiescent goitrous enlargements as harmless or innocent, simply because there are no clinical manifestations. Indications for surgical treatment are clean-cut and may be briefly stated as follows, with reference to certain well known groups: First those cases, whether toxic or simple tumors, in which there are pressure symptoms requiring relief.

Second, those cases where systemic toxemia, or thyrotoxicosis demands that the excessive secretion be shut off by thyroidectomy in whole or in part.

Thirdly, the occasional operation performed for cosmetic reasons, and lastly of course, those regardless of size or symptoms where malignancy is suspected.

The point I wish to stress however, concerns not these widely accepted indications, but the question of treatment before urgent symptoms have arisen.

There is no innocent goitre; even the adolescent colloid of puberty has its potential dangers. These demand operation if iodine has failed to bring about resolution and puberty is well established. Operation should no doubt be delayed but the patient must be kept under careful observation. I wish particularly to direct your attention to the apparently harmless colloid or adenomatous tumor, frequently seen in the third and fourth decades and producing no outspoken clinical symptoms. These are the cases which after sudden onset, come to the surgeon with the acute toxic symptoms, and which on careful examination are found to be suffering from degeneration of vital centers making surgery hazardous. Such risks to life and to post-operative morbidity should be avoided by operation in the quiescent state; thus, we may safely offset these potential dangers with a minimum of risk and with a high degree of satisfaction to patient and surgeon alike. The problem here is comparable to the interval operation for appendicitis and has the same excellent points to recommend it.

The 4th point of confusion and a potent source of error concerns the question of opera-

tion when surgical management has been elected as the best plan of treatment for a given case. Let us consider for a moment the practice that has been in vogue among surgeons in the past. The thyroid has been approached as if it were a new growth the dominant idea in the mind of the operator being its complete removal. This plan should be condemned. The thyroid is a living, functioning organ, necessary to the metabolism of the body and should be approached by the surgeon with a purpose to restore it to as nearly its normal functional capacity as possible; hence, no routine operation can be done in any given case. To decide in advance and without the proper study of a case that a complete thyroidectomy, a lobectomy, a bi-lateral resection, or other operative procedure is indicated, is to court disaster. Such a blind plan is comparable to that adopted by certain abdominal surgeons who open an abdomen for the purpose of removing an appendix, or to do a hysterectomy, or to resect a gall bladder. Having mapped out the plan in advance, the operation must conform to the preconceived notion, regardless of the pathology found on exploration.

The goiterous patient is he who suffers from a malfunction of an essential organ. Either mass of gland structure requires reduction as in the simple colloids and adenomas without toxic symptoms, or the problem is one of reduction of secretion as witnessed in the hypersecretory class.

Routine X-ray surgical or medical care will be seen then not to suffice. The individual case must be studied; the facts all carefully weighed and the plan adopted which suits the case in hand.

The 5th point is failure to follow thyroid cases, after medical or surgical care has been given. Either hyposecretion may follow, requiring the judicious administration of thyroid substance, or excessive secretion continues, when additional measures for further reduction must be adopted. A second or third operation thus becomes necessary in certain cases, and should commend the surgeon for care and conservatism, rather than condemn him for leaving too much gland, making further surgery necessary. With experience

however, comes wisdom and soon one finds it possible in most cases, after deliberate study to do a curative operation at one sitting.

An embarrassing situation has frequently confronted the thyroid surgeon in the past in the matter of acute post-operative hyperthyroidism, followed so often by unexpected death, to the dismay of the operator, the critical concern of relatives and friends, and to the general hurt of scientific surgery. This tragedy has grown to be much less frequent than in the early days of thyroid-operations marking one of the triumphs of modern, conservative surgery. By carefully timed polar ligaments and by one-step operative procedures upon the gland, even the desperate toxic cases may be safely carried through operation. This pitfall should be avoided and can be safely bridged by careful ante-operative preparation, selection of time and type of operation, and particularly the choosing of a safe anesthetic—all of course, coupled with a conservative attitude upon the part of the surgeon. The anesthetic has been the turning point on which many well-timed and skillfully performed operations of the past have drifted to the rocks.

Thyroid surgery lends itself splendidly to work under local anesthesia. We have been able thus far to do three out of every five cases under the local method, and have found that its use in the balance may be depended upon with the addition of gas analgesia. The administration of local anesthesia constitutes one of the most satisfactory advances in thyroid work, and personally, I should be loth to attempt the management of routine cases if dependence had to be placed in the old inhalation anesthetics. Collapse of the trachea, injury to the recurrent laryngeal nerves; the necessity for haste; post-operative shock, nausea—these troublesome factors in the work of pioneer surgeons in this field, have been largely overcome by the introduction of local anesthesia. All, however, do not respond to the method. Cases must be carefully chosen. It is not suited to the exophthalmic type, with greatly increased reaction to all external stimuli. Moreover, the thyroid should not be associated in the minds of the profession with such triumphant conditions as hernia, acute appendicitis,

or dengue fever. The problem after the disease has developed is widely different from those conditions above referred to, which may be specifically cured. The thyroid sufferer needs rather to strike the best bargain available, and while certain types are cured, the malady, at least for the present time, must be looked upon as furnishing a field for palliative endeavor.

In this connection, should be mentioned and remembered the fact that, while thyroid disorders arise in the thyroid gland, outside conditions play an important role in initiating and continuing symptoms after the disease is established. A common error therefore, representing my last point, is neglect of foci of infection at distant points, in the tonsils, teeth, gall bladder, appendix, pelvis, which require eradication for the best results, either before or after thyroidectomy. As frequent an error however, is the dependence upon the proper care of these outside conditions to correct pathologic processes definitely set up in the thyroid gland. Experience and collected data indicate the necessity of attacking both ends of the vicious chain, if the best and most lasting results are to be obtained.

To briefly summarize the main points. The incidence of thyroid affections and the morbidity resulting from abnormal states of this gland, are not adequately presented to the profession through the occasional large goitre seen in every community. The field for fruitful endeavor lies among the less dramatic but the markedly increased numerical group seen in both sexes and manifesting symptoms by virtue of hypo or hyper-secretion, either with or without tumor in the neck.

The prevention of thyroid disease is a public health question. Experimental data indicates that the disease may be prevented by iodine administration in early life.

The use of iodine is a two-edged sword when employed in treatment of certain types of goitre. Careful study must be made in advance to determine whether the gland is hyper or hypo active. When found suitable for this plan of treatment, careful follow-up attention must be given, lest a quiescent thyroid be precipitated into an active one. At the present time, iodine for treatment should be limited to the colloid enlargements seen in adolescent

girls. Iodine is distinctly contraindicated in adenomas and toxic cases, and yields no benefits in the way of reducing the mass when given to colloid cases in adult life.

Enlargements of the thyroid gland are never harmless; altho considered physiologic when associated with the age of puberty and with the pregnant state, there is accumulating evidence which strongly indicates that these are the cases which give trouble later in life. The concern of the physician here should be to aid by iodine therapy, the establishment of complete resolution in the gland after the period of physiologic stimulation has passed.

Operative treatment of permanently established hypertrophies in the gland, whether manifest as in the adenomas or large colloids or more or less concealed, as in many of the toxic cases, must take into account gland physiology, rather than the "will-o-the Wisp" adoption of routine operative methods. The ideal operation is one which reduces gland mass to that compatible with comfort and cosmetic result, when the indication for surgery is pressure on the neck structures, or that procedure which destroys a sufficient part of the gland tissue to adequately cope with the excessive supply of thyroxin when hyperplasia and hypersecretion demands treatment. Here the big question of surgical judgment and experience is required, and even then, repeated operations may become necessary. The total excision of the hyper-active gland, frequently converts a thyro-toxic patient into a myxomatous one requiring thyroid administration.

The best results are obtained where all foci of infection are given adequate care. When systemic disorders of toxic nature have awakened a normal thyroid into pathologic activity and especially where this vicious influence has been long operating, the thyroid will not return to normal simply by removal of the infectious foci. Combined operations are required and usually it seems best to start on the thyroid and follow up after treatment by attention to ectopic infectious foci.

Acute post-operative hyperthyroidism is becoming rare with the introduction of local anesthesia. Polar ligations and the many-step operation, thorough study of each individual case; avoidance of hasty operations with inade-

quate pre-operative observations and preparation, will soon lower this embarrassing complication to that irreducible minimum so impressively referred to in the writings of the late Dr. Maurice Richardson.

Finally, and with reference to the question of who or which branch of the profession should undertake to handle thyroid cases, we feel that the question is as yet unsettled. Certainly many cases are medical; some are benefited; a few cured by X-ray and radium, and all must agree that surgery will be invoked in a large percentage of bona fide cases, even though chosen as a last resort after medical or other methods have proved inadequate. The question is covered I think by saying that the medical man should not treat certain cases too long; neither should the surgeon operate too soon. Better to my mind is the association of internist and surgeon, and I conclude with the prophecy that this and other so-called border line problems in medicine will find their proper solution only as our various specialists are drawn by better understanding and a more sympathetic co-operation into that concert of action so feelingly referred to in many public addresses of our illustrious ex-president Wilson.

Those among us who are seekers after the truth will neither sanction operation on goitre cases until the evidence is convincing, nor permit unsound theories to lead us into ineffective therapeutic channel in that group of cases in which the brilliant achievements of modern surgery may play such a helpful part.

DISCUSSION ON THE PAPERS OF DRs. CHAS.

E. WAITS AND C. W. ROBERTS

Dr. W. A. Selman, Atlanta—I have enjoyed these two papers. They were concise and full of what they were supposed to contain. We are bound to follow the masters in thyroid surgery, and the masters are found in the great centers of surgery over the country, especially where goiters are more numerous than in this state. If it comes to a discussion of fibroid tumors, for instance, we feel the clinics of Georgia can hand it to any section in the United States, whereas in the large clinics of the North I have seen practitioners flock around the operating room to see a fibroid tumor. Here in the South our clinics abound with as many fibroid tumors as the clinics of the North with thyroid tumors.

The methods of handling these cases and the pitfalls I think have been mentioned, but some measures

for the safety of these patients have not been mentioned because time did not permit of it.

One of the things that was not mentioned for lack of time by Dr. Waits and Dr. Roberts is the safety thrown around these patients in the choice of the anesthetic. Men who do much thyroid work at this time have stopped the use of ether on account of the safety of other anesthetics, especially in the toxic cases. In the more toxic cases, where every care has to be exercised, frequently no anesthetic except a local is used, and in the more nervous type a local in combination with gas oxygen anesthesia. This in the hands of most men has reduced the mortality along with the other safety measures possibly more than any one feature. There is no need of further narcotizing these patients and adding an extra hazard to their already toxic condition. Polar ligations can be done without pain, without any extra apprehension on part of patients when it is explained to them. A simple small incision with ligation is all that is necessary. The patient anyway does not know much about the blood vessels and when he or she, as the case may be, feels only the prick of the needle at one time his fears are largely allayed.

In regard to what Dr. Roberts said in his paper about iodine. I have many times seen patients, especially women, come into the office showing that their necks have been repeatedly blistered with iodine applied from time to time, and they seemed rather surprised that the application of tincture of iodine to the skin has not removed the tumor, when all the while they are feeding this tumor on the very thing that tends most to increase its growth.

Of course, basal metabolism and other measures have been gone into, and the mortality of thyroid surgery has been greatly reduced. What was once considered one of the bloodiest operations in surgery is now rendered as safe as the average operation.

Dr. Thomas Chason, Donalsonville—I have enjoyed these papers very much. I must say, however, it has not been my experience, as stated by Dr. Selman that there is not much goiter in Georgia. My experience is contrary to his. I see a great deal of goiter, and I think it is on the increase in certain localities. In the rural communities goiter is very much on the increase. I think if the average practitioner, who sees these cases and treats them first much good could be done. Take the adolescent stage girl, the hydrobromate of quinin in five grain doses will usually take care of her goiter.

In toxic goiters, where you have hyperthyroidism, hot water injections can be used. Any practitioner can inject these goiters with hot water; it will usually reduce their size and make them form undesirable operative cases to very desirable ones. The technic is very simple, but it should be followed rigidly in order to get results. Usually I use procain in about one per cent. solution, and about 4 drams to each goiter, two on each pole to anesthetize them; then have the syringe boiled or sterilized in a

caldron of hot water. Having the area exposed that is to be injected, I inject one area after another and put around them wet towels, and then inject the hot water through eight or ten layers of sterile gauze. Unless you do this, you are apt to burn the patient, holding the alcohol lamp all the time under the syringe and pressing it through the eight or ten layers of gauze into the substance of the goiter. I see results from this treatment in twenty-four hours. One hardly realizes how much good it will do. The hydrobromate of quinin in adolescent girls is a good thing.

As to iodine, it is my experience that cases come to us, as Dr. Selman says, who have received iodine ointment and many other things. I believe 90 per cent. of the goiters, even of the toxic variety, can be relieved by the injection of hot water and other means of building up, and a possible 10 per cent. that come to operation will be ready for that in the stage that has been suggested.

Another thing: Boiling the water is always very important. I saw in one community eight negro families who took water out of one surface well, and in those families there were 14 out of 28 or 30 people suffering from goiter. What that connection is I do not know, but yet the increase of goiter is becoming very alarming.

Dr. T. C. Davison, Atlanta—One of the speakers referred to the goiter question as being simple. If there is anything simple about the goiter question I have never found it. There is no branch of medicine or surgery which is more complex and entails greater responsibility in handling cases than the goiter question.

Let us take the prophylactic treatment of goiter. In a conversation with Dr. Crile, of Cleveland, I asked him what percentage of women in the goiter belt around the Great Lakes had goiter and his reply was "All of them at some time or other have had goiter." About one out of every five women on the streets in Cleveland and in Cincinnati shows evidence of the disease. Dr. Crile had administered some form of iodine to school children during the adolescent age, from two to six weeks each year, but we wish to sound a note of warning against the indiscriminate administration of iodine to these children.

Recently I had a child under my observation, six years of age, who, at the age of five, developed a noticeable enlargement of the neck. A physician had prescribed iodine and the child took it for a long time. This child developed an acute exophthalmic goiter at the age of six, was removed from school, and became extremely nervous with acute symptoms of hyperthyroidism. Following a partial thyroidectomy the child's condition has returned to normal, and she has gained in weight. We cannot be too careful about the indiscriminate use of iodine. You would not think of treating a patient with high fever without the use of the clinical thermometer, and so I do not think we should attempt to treat any case of hyperthyroidism or goiter without basal metabolism readings. The use of the basal metabolism in testing thyroid cases to

know what condition we have to deal with is absolutely essential. It is necessary to find out whether the case is hypo or hyper, and if hyper how toxic it is, and it takes this machine to tell you what you have to deal with.

The indications for operation for goiter are very definite. First a goiter that is large should be removed for its cosmetic effects. Second, on account of pressure symptoms. If the goiter is pressing on the trachea, producing obstruction to respiration or pressure on the recurrent laryngeal nerves or some of the other important structures of the neck, it should be operated on. Third, thyrotoxicosis. A toxic goiter should always be operated on, and we should get these cases before there are organic changes which cannot be overcome. Many times we get our toxic goiters too late. You may operate, but you cannot undo the damage done to the heart, liver, kidneys and nervous system. Fourth, suspect malignancy in any woman past mid life, forty or fifty years of age, who has a goiter which grows rapidly. I have had four such cases, one a woman, 56 years of age, who had a goiter present for years which began to grow rapidly. We removed what I thought was a harmless growth, but the pathologist pronounced it adenocarcinoma.

As to the anesthetic, I think the majority of cases can be operated under local anesthesia. There are the type of cases with extreme thyrotoxicosis, with extreme nervousness and bad hearts, where we have organic degeneration of the important organs, and it is necessary to use, in addition to local anesthesia, a light gas oxygen anesthetic.

Dr. J. W. Daniel, Savannah—The subject of the thyroid and its therapy is a very interesting one, and I want to congratulate the gentlemen upon their excellent papers. I have heard Dr. Roberts before on the thyroid and each time I learn something. He is getting to be quite a teacher. I am not a surgeon, therefore, I cannot discuss this subject from a surgical point of view. Last summer I had the good fortune to be ordered to the Army Medical School in Washington where they are doing research work on basal metabolism. They had a large series of goiter cases in both men and women. The women, of course, were connected with the Army and the men were in the Army, and could be controlled.

Their method was this: The patients came for diagnosis or to confirm a diagnosis based upon the usual clinical findings. If a high metabolic rate was found it was pronounced hyperthyroidism. The patient was then sent to X-ray department. The X-ray was not given indiscriminately, the proper dosage was based on the plus side of the basal metabolic rate. The day after the exposure the basal metabolic rate was again taken. If the rate had dropped within the normal limits of plus or minus, the patient was not given a second exposure, but was required to report to the clinic at weekly intervals. Three readings were taken and if these readings still remained within normal limits there were no further exposures. If there is an increase the patient is given a second ex-

posure. This treatment is continued until a normal level is reached and becomes permanent. Some of these cases had been under observation for four years, and after a series of exposures had never had any plus readings above normal. Others, of course, did, but the majority of them showed what we may call a cure up to that time.

I have never found a panacea for any pathological condition in medicine. I am not here advocating X-ray to the exclusion of surgery. Surgery is indicated in many cases, and probably in this school of research work some cases are referred to the surgeon, but the majority of cases were permanently relieved by the use of the X-ray.

The doctor who preceded me brought out a point which may have been in the other paper—I do not know, namely, for these cases there should not be a second operation until after a period of observation for basal metabolic rates. This should be the guiding point in all thyroid work in my opinion as a non-surgical man.

Dr. H. M. Davison, Atlanta—Dr. Waits mentioned a high metabolic rate of 114. I picked up a negro boy at the clinic who had a small goiter. In taking the history carefully it was found that two weeks before his goiter started he had been given some of Swift's SSS which I understand contains a large percentage of potassium iodid. I mention this as a cause possibly in starting the goiter which increased from the beginning of taking some potassium iodid. This boy was brought to the office and a basal metabolic reading was taken and it was 110. I thought I had made a mistake. I wrote the manufacturers about the measures I used, and they wrote me an indignant letter, and said surely I made a mistake, and that a reading of over 100 could be discarded. I asked Dr. Sauls to check up, and he got a reading of 124. I had another reading and it checked up between 120 and 130. This case was ligated by Dr. T. C. Davison and the boy beat it for the bushes. We have not been able to catch him since to take another reading.

I mention this case to emphasize the point that the boy was working every day in a canning factory. He had no tremor, but twitchings in his face with fixed vision on near objects. He had lost very little in weight. The greatest use of basal metabolism is in getting these cases that need treatment. We want also to find out any focus of infection. In these cases there is nothing to do except to resort to surgery. Basal metabolism rates can be used in adolescent girls. You may have readings of minus four or minus ten or fifteen, or normal, or plus four to ten. Readings are given as normal for minus ten to plus ten, a variation of twenty. If you have any reading within that range of normal with a goiter that is beginning to enlarge and growing slowly, it seems to me the practical thing to do is to start with small doses of iodine in some form and check the reading in a week or two weeks; then if there is no increase in the reading, you may increase the iodine, watching the goiter and taking readings as you go along.

No doubt every surgeon present, who has operated on goiters, can look back on his cases and see some he wished he had not operated on. If you take out goiters in some girls when they have normal or hypofunction, in a few years you will have marked hypofunction and will have to give them thyroid for the rest of their days.

Dr. Charles H. Watt, Thomasville—I think Dr. Roberts said a great deal in speaking about the prevention of goiter. Those of you who are particularly interested in goiter are familiar with the work of Dr. Crile and his assistants in Akron, Ohio, where in canvassing the schools they found such a large percentage—something like 60 per cent.—of girls who had simple goiters or thyroid enlargement, and by the administration of sodium iodid in small doses, twice a year, they succeeded in cutting down this percentage very much.

In our section of the state (southwest Georgia), as Doctor Chason stated, the percentage of goiter is on the increase. It is either that or else we are on the lookout for it and are more able to recognize it. There is a great deal of goiter throughout that section of the state, and the Thomas County Medical Society, in connection with the county health officer, has put on a campaign through the schools to determine the exact percentage of simple goiters in girls from the fifth to the twelfth grade, and it seems to me it would be a good idea for the state to put on such a campaign, and if I am properly informed that is now the intention of the Public Health Service.

Dr. Waits, (closing on his part)—I wish to lay further stress upon one point mentioned by Dr. Roberts concerning thyroid enlargement. The fact that a girl has an enlarged thyroid does not mean that she needs surgery, nor does it mean that she needs iodine or thyroid extract. Especially is this true in those young girls seen about the age of puberty. In the majority of these patients a careful study will reveal nothing abnormal except a slight enlargement of the thyroid. The metabolic is practically normal. In many of these young girls we find infected tonsils, which of course, ought to be removed. Elimination of such focal infections, plus the reassurance that the thyroid enlargement will probably subside as maturity comes, will in a great number of cases be all that is necessary in the way of treatment.

In these extremely toxic patients we must not ignore the internist. He may be of great help in the pre-operative study of the heart and kidneys. If we can be reasonably sure of the heart strength we are better able to judge as to the character and extent of the operative procedure to be applied. The internist should also play a part in the post-operative management of these patients. They must be taught how to live for at least one year after operation.

I must differ with Dr. Chason regarding his attitude toward the injection of boiling water. It is not a simple procedure, and should never be undertaken in

a patient outside of a hospital, or by one inexperienced in thyroid surgery.

Dr. Roberts, (closing)—With reference to the point of incidence of thyroid, one of the points I tried to bring out specifically in the paper was that we injudiciously have been trying to make ourselves believe that a great many people did not have goiter who really had it. We have such individuals in every community in the state, people with apparently full necks, old goiters of the colloid adenomatous type, not producing symptoms. The point is that we have enormous numbers of goiters; that goiter is endemic; it is on the increase. If we study the physiology of the thyroid gland we can understand why our people are living in high tension, coming to us with hypertension, the heart and nervous system, and particularly the nervous system which controls as a rule the sympathetic nervous system, thus influencing the thyroid, producing growth of the acinous tissue and epithelial tissue of the gland and developing symptoms. We have a number of cases of patients who have no evidences of thyroid disease but simply full necks. We believe thyroid trouble is on the increase in Georgia, and we are discovering the symptoms. We need not fight over how to treat it; we are all striving to solve the same problem. When a patient has symptoms of thyroid disease it is due to one thing, to this increase in the epithelial tissue of the thyroid gland, to the activity in the epithelial structures of the thyroid. What does the x-ray and radium man do? He tries to destroy this tissue by the use of the x-ray and radium. The internist keeps out a certain amount of blood from flowing through the thyroid by putting the patient at rest, by giving quinin and ergot which contract the blood vessels, shedding out a certain amount of blood flowing through the thyroid, and so the internist prevents particles of thyroid from getting into the circulation. We are all working to achieve the same end. There is no fight between the x-ray and radium man and surgeon. There was a time when the surgeon could not insist on treating these cases with the x-ray because from 25 to 60 per cent. of the cases were lost by labors in this line, and we could not insist on the medical man giving us a chance to deal with these cases surgically. However, in recent times we have reduced the mortality rate of thyroid work to quite an irreducible minimum, so that a death in a thyroid case is a real tragedy, and a good man will surely wait, and where he loses one case in thirty by operation, that is an irreducible minimum below which we can never obtain by medicinal measures. We believe in surgery in many of these cases, and we believe there is a great reduction in the mortality rate from the use of local anesthesia. From our study of these cases beforehand we can justifiably stand up before medical men and point out the advantages of modern surgery in the handling and reduction of the activity of this gland.

REPORT OF FOUR CASES OF CICATRI- CIAL STRICTURE OF THE OESO- PHAGUS*

Lawrence Lee, M.D.,
Savannah, Ga.

Case No. 1. Colored man, age 43, married, born Levy, S. C. Lived for greater part of life in Savannah, laborer, cotton and lumber, accustomed to doing hard work. 13 children, 10 of whom died in infancy. Had measles and diphtheria as a child. Said he had malaria 4 years ago but history sounds like typhoid. No chills and sick 21 days. Had gonorrhea 3 years ago. No history of syphilis, rheumatism, or ulcers. Epitrochlears enlarged. Has beginning arcus senilis. Wassermann not made, as this case was before the test was done in Savannah. No previous symptoms of Raynaud's. Troubled with steadily increasing impotence for about a year which has caused him a great deal of anxiety and for which he had taken a great many drugs. Constantly on his mind, and he says that for this reason, he tried to kill himself February 5, 1912, by eating potash. Had been able to do his work and was otherwise feeling well until that date. He was carried to the Georgia Infirmary in an insane condition and had to be restrained with a straight jacket. Mouth and pharynx badly burned. Vomiting blood. Could retain nothing on stomach. Remembers little of this time. His family objecting to the straight jacket took him home February 12, 1912.

I saw him first Feb. 14, 1912. At this time his mental condition was much improved, but his sister told me that he talked out of his head at times. He was very thin and weak and still vomited almost everything he ate. He complained chiefly of severe pain in his legs and feet which he first noticed the night he returned home. He said they were paralyzed. On examination they were cold, ankles and legs slightly swollen and toes a little shrivelled and mottled in appearance. These symptoms were so little marked that they would only be noticed on careful examination. He had loss of sensation to pain from prick of a pin and to touch from his knees down. He said he could not move them but I noticed that he did flex his legs on his thighs several times when I was examining

him, once drawing his knee up to an angle of almost 90 degrees. As the man was partially out of his head, I did not know how much importance to place on these symptoms, so gave him some morphine for his pain and put him on milk and albumen water, and left him, telling his sister to let me know how he was in two days and to call me if I were needed. She came to my office two days later and said that Sam was much better. Could retain all his food and was suffering no pain, and there would be no need to return. I did not hear from her again until March 8th when she came to my office and said that she had rubbed Sam's legs with some warm lard that morning because they looked a little dry and shrivelled, and that the flesh had fallen off the bone. She asked me to see him again. Her description was no exaggeration. When I saw him that morning, the odor in the room was almost unbearable. When the old rags were removed in which they had his legs wrapped, it revealed the fact that his right foot and leg was gangrenous up to the upper 1/3. The foot showed dry gangrene but the muscles of the leg were a soft pulsatious mass, which had fallen off the tibia and fibula for a space of 6 to 8 inches and were hanging, one could almost say dripping from them. The left leg showed dry gangrene to the ankle where there was a clearly marked line of demarcation.

I sent him back to the hospital and with the assistance of Drs. Jones and Thomas amputated his left leg about two inches above the line of demarkation. Nature had already almost completed that. All that was left to do was to saw through the two bones. The reason that I did not do a higher amputation was that the man's condition was so poor that I doubted if he could live through the little I did. My object was merely to get rid of the rotten mass which smelled so no one could stay in the same ward with him, and from which he was absorbing septic material. I intended to do a higher amputation later when he was in better shape and when there would be a better chance of getting a clean wound. For the first 24 hours after the operation he was very ill but after that steadily improved. Both stumps in time healed without the necessity of a second operation on them. Patient failed to improve as fast as he should and later began to grow weaker again on account

*Read before the Medical Association of Georgia, May 2-4, 1923.

of strictures of oesophagus, which developed as result of swallowing lye when in insane condition. From being able to take very soft food, it reached the point where even fluids were frequently regurgitated. All attempts to pass bougie from above failed on account of tightness of strictures. On May 10th although patient was in very weak condition, I did a gastrotomy. Succeeded in passing a vertebrated probe up from below and with this drew through several strands of strong fishing twine. By using one of these cords to saw with, I succeeded in dilating stricture to full size. Closed stomach and abdominal wound and fed patient through mouth passing bougie every few days to keep the stricture patent. Patient did well and gained strength rapidly. Was out of bed and around in wheel chair in 10 days. After lapse of several weeks patient died suddenly after about a three hours' illness. No autopsy permitted. Unable to discover cause. No vomiting, no pain, no constipation, some slight diarrhoea two days before death. History of eating fishballs which may not have been fresh two days before. Symptoms present in attack were cold extremities; pulse very weak, not rapid muscles of entire back more or less contracted and rigid; unconsciousness. Eyes wild in expression and wide open. May have been uraemia, acute intestinal toxemia, or cerebral Raynaud's. I am personally of opinion that it was the latter.

On March 23, Dr. Lavender was kind enough to make an examination of his blood which showed as follows:

Examination made March 23, 1912.

Hb. 60% Tallquist scale (see later comment).

W. B. cells 25,500.

R. B. cells 1,352,000.

Color index 2. (See later comment).

Differential: (Total count of 500 cells).

Polynuclears	-----	74.8%
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Small lymphocytes	-----	(15.2)	12.2
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Large lymphocytes	-----	7.2
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Large mononuclears	-----	1.2
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Transitionals	-----	1.6
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Eosinophiles	-----	0.0
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Basophiles	-----	0.0
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Qualitative changes in red cells: pallor, anisocytosis, but not marked, few poikilocytes, polychromatophilia slight. The qualitative changes were not so marked as one would expect

from the count. No nucleated reds were observed, the haemoglobin estimation was made with the Tallquist scale because no other was convenient under the circumstances, but the very high color index and the rest of the examination make it pretty certain that the hemoglobin estimation is erroneous. The white cells showed little worthy of comment. Many of the polynuclears are vacuolated. Granules were frequent and marked in many of the lymphocytes. No parasites were found.

On April 7th blood examination showed haemoglobin 60%, leucocyte 10,000 reds 3,000,-000. Urine examination made on March 10th and 12th showed urine normal. No albumin. Dr. Bassett made sections from the vessels of the amputated portion of his left leg, the result of which showed moderate degree of arteriosclerosis. No obliteration of arteries or veins either by thrombosis or arterio-sclerosis.

A curious incident connected with this case is that on November 3rd, his sister, age about 40, had a peculiar attack in which for two days she was out of her head and would not speak. For several days after this, she claimed that her left leg felt numb and paralyzed and she was unable to use it freely for over a week.

Case No. 2. Brooks Johnson, white boy about 7 years old. Admitted to Telfair March 26, 1918. On admission very pale and anaemic, emaciated. Swallowed fluid with difficulty. Weight 28 3/4 lbs. Effort was made to build up his condition by feeding him plenty of fluid nourishment by mouth but there was no gain in weight. Referred to me in June and operated on June 5, 1918, Telfair Hospital.

Incision was made through upper part of left rectus. Stomach drawn up into wound and opened and a vertebrated probe passed into oesophagus through stomach. After some manipulation, succeeded in passing it through stricture. The assistant caught the end of the probe with forceps in pharynx, and probe was pulled out through child's mouth after fine fishing cord had been tied to lower end of probe. Two strands of cord pulled through, and to end of one a small bougie with a brass loop on each end was tied. A second piece of cord was tied to the other end of the bougie. The bougie was then pulled up until it engaged in the stricture and became jammed. The assistant then with

one hand kept traction on the cord tied to the bougie, and with the other hand assisted the surgeon in using the other cord pulling it upward and downward through the stricture. This gradually sawed the stricture as the cord was pressed into it by the bougie. The bougie gradually slipped through the stricture as the scar tissue gave away. In coming out it brought with it on its other end a second piece of cord to which a large bougie was attached, and the same procedure was repeated with this larger size. Larger sizes were steadily used until the oesophagus permitted the passage of an oesophageal bougie with a large tip. A rubber tube was sutured into the stomach as in any gastrostomy, and the patient sent back to the ward and was fed through this tube for over two months. At first bougies were passed every 3 or 4 days down the oesophagus through the stricture. The interval was gradually lengthened until increased to a month, since which time the child has failed to report back. When last seen he was robust, and healthy and largest size bougie slipped in easily. He will probably relapse, however, as he has failed to return now for 3½ years in spite of several letters having been sent to his father warning him of the necessity of continuing this treatment. This case did not improve as he should the first month after operation. He remained anaemic and did not gain weight in spite of large amounts of food being given him through the gastrostomy wound. It was then found that he had hook worms, and after being relieved of these, improvement was rapid. In July before hookworm treatment he weighed 31 lbs. On Sept. 24 he weighed 42½ lbs.

Case No. 3. Willie Waters, age 3, admitted to Telfair March 11, 1921. Almost moribund from starvation. Unable to swallow even water. Covered with numerous furuncles. Severe bronchitis. Weight 16 lbs. 14 ozs. 5% glucose given subcutaneously to provide fluid and nourishment. With the assistance of Dr. Jones, a gastrostomy was done the next day. No effort to dilate stricture at this time as child's condition would not permit it. Was at point of death for several days but gradually improved. Immediately after operation, he was turned over to Dr. A. J. Waring, pediatrician for feeding. Improvement was very slow. He developed double otitis media April 16th and pneumonia April

27th. It was not until July 18th that his condition was improved enough to warrant any further operation to try to cure his stricture. An X-ray taken June 21 by Dr. Drane showed that there was a small permeable sinus through a broad stricture at level of 2nd rib. At the time of the operation in July, however, I was unable to get through from above or below with any instrument, filiforms being even tried.

He was sent back to the ward and fed through his gastrostomy wound and gradually gained strength and was able to be up and around, but still was markedly underweight; pale and undernourished, although a large amount of food containing plenty of calories were administered daily, through the tube in his stomach. (These cases miss the stimulus to digestion of taste, chewing and swallowing and do not gain weight normally).

I wrote Dr. Chevalier Jackson at the Bronchoscopic Clinic in Philadelphia, the inventor of the Jackson Bronchoscope and Oesophagoscope, and he was kind enough to permit me to send the child on to him. I thought that as the X-ray showed a permeable stricture, he might be able with the oesophagoscope to see the opening and introduce an instrument. I cannot say too much of the kindness of Dr. Jackson to this child. He kept him free of charge at his Clinic from August, 1921 until December, 1922; and with the aid of his pediatrician built him up into a strong, robust child; strong enough to stand the very dangerous operation he finally had to do. The following is a description of the operation done by him December 20, 1922.

Conditions Found on First Endoscopy: Retrograde esophagoscopy by Dr. Clerf; bougie passed through retrograde esophagoscope upward through fistulous passage until firm obstruction felt. Esophagoscope passed through mouth by Dr. Jackson down through the structure the entire funnel of which was found to be ulcerated, the ulcers being filled with fungating granulations. Dr. Manges reported that the upper esophagoscope was pointing in the correct axis toward the tip of the opaque filiform bougie that had been passed upward from below. Forceps inserted through upper esophagoscope and an impervious zone of about one cm. in extent was perforated with side-curved forceps under the guidance of Dr. Manges' report as to direc-

tion to be taken. Dr. Manges' reports based on the shadow seen by him in the double plane fluoroscope. When forceps reached the tip of the bougie, the latter was seized and withdrawn up through the upper esophagoscope, sufficiently far to merge from the mouth. The upper esophagoscope was then removed and a braided silk cord was tied to the bougie, which was then withdrawn through the gastrostomic wound carrying the silk cord with it. A heavier cord was then substituted for the thin silk one. The upper end of the cord was then brought through the nose.

This patient was unfortunate enough to develop measles 3 days after this operation and he died Jan. 1, 1923, of a broncho-pneumonia.

Case No. 4. Jos. Oliver Butler, white, 3 years, male, admitted to the Telfair Hospital July 28th, 1922, in moribund condition as result of starvation and lack of fluid. Unable to swallow water. History of having eaten lye April 19, 1920. So weak unable to sit up. Severe bronchitis, weight 18 lbs. Gastrostomy done with assistance of Dr. Jones, the day of admission. Turned over to Dr. A. J. Waring, pediatrician, for feeding. Promptly developed a broncho-pneumonia after operation and was at point of death. High fever for two weeks. Very gradual improvement. X-ray of chest was suspicious of tuberculosis. Developed furunculosis. Many small subcutaneous abscesses appeared. With the most careful diet and forced feeding, he was strong enough to get out of bed and walk a little by November. Weight 23 $\frac{1}{4}$ lbs. On Nov. 3, operated on with assistance of Dr. Jones. Gastrostomy wound opened and vertebrated probe passed from below. Stricture about 1 $\frac{1}{2}$ inch from cardia. Got through after a little manipulation. Second stricture just below region of cricoid. Unable to get through; tried for half an hour. Dr. Jones said with finger in pharynx, he could feel the end of the probe through scar tissue. Force used and probe pushed through. Fortunately it came into pharynx and did not make false passage under pharyngeal mucosa, as I saw in a case I assisted another doctor in several years ago. Probe grasped and pulled through and stricture dilated by Abbe's method of sawing with a string while tension was held on bougie engaged in stricture.

I was afraid in this case to rapidly dilate to full size for fear of rupturing through into mediastinum or neck. Dilated only to second size bougie. Bougies were passed from above every five days. Child fed through gastrostomy wound for 6 weeks. Then food given by mouth. By January 14th largest size bougie was passed but with great difficulty. Child had to be anaesthetized for each treatment. Stricture bled after each dilation. This child is still under treatment. Bougies are passed every two weeks. He is strong, well nourished and healthy looking. Weight, Jan. 26, 28 lbs. 10 ozs. The gastrostomy wound has healed. If his parents will continue to bring him back for the passages of bougies, I am sure he will ultimately recover.

In addition to these cases reported in detail, I have operated on two or three other cases but do not recall their names and therefore, cannot look up their records. These cases lived and were doing well when they were last seen by me. All were operated upon by the same method. I assisted in two others, one of which died the next day, and the other was impermeable and we were unable to get through and was lost track of.

There are several points which I think deserve to be stressed in these and such cases:

1. As such cases are seldom seen by the surgeon until they are in extremis and badly nourished, I consider it unsafe to do what I did in my first two cases; that is, to attempt to go through the stricture at the first operation. It is far better to do a gastrostomy and after the patient has gained weight and strength, then operative on the stricture.

2. When operating on the stricture be satisfied to dilate slowly, if the stricture is firm, otherwise, it is easy to tear through and get a leakage into the mediastinum, and this means certain death. This happened in a case I assisted in, and death followed within ten days.

3. After the stricture is opened do not begin to feed immediately by mouth as food will irritate the fresh raw areas and there will be infection, delayed healing and more scar tissue than if feeding by the gastrostomy wound is continued until the freshly torn area in the oesophagus has healed.

4. All these cases have had lung complica-

tions, whether from damage to the larynx by the lye or from tuberculosis resulting from their poorly nourished condition, I am unable to say. All that I have seen have had bronchitis and most of them pneumonia at some time in the course of treatment.

5. The assistance to digestion rendered by the taste of food, mixing it with saliva by chewing and by swallowing it in the normal way is well demonstrated. These cases progress extremely slowly as long as fed through the gastrostomy wound, and go up by leaps and bounds as soon as fed by the mouth.

I wish in closing to acknowledge that without the assistance and advice of Dr. Jones in operation, and of Dr. A. J. Waring in feeding, these children would not probably be living today. I also cannot say too much of the kindness of Dr. Chevalier Jackson in taking care of Willie Waters, the third case, and of my admiration of his skill in getting through an obliterated oesophagus. It was extremely regrettable that measles and pneumonia should have brought to an end a case which was such a triumph in surgery.

THE TECHNIQUE OF LUMBAR PUNCTURE

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At the present time lumbar puncture is being used more and more frequently, both in diagnosis and in treatment. It is advised by some to do a lumbar puncture on every case of lues before dismissing it as cured. The procedure should be made as easy as possible both for the patient and for the operator. Observations while on service in various civilian hospitals and clinics, and while in charge of a meningitis ward in an army base hospital gave evidence that the method used by the average operator gives ease neither to the doctor nor to the patient. We observed, first, that every patient was frightened the first time a puncture was performed on him; second, that patients dreaded following punctures; third, that some chronic cases ceased taking supposedly necessary treatments because of the attending pain; fourth, that no operator entered the spinal canal every time at the first

attempt; and fifth, that many doctors avoided doing lumbar punctures because of the pain necessarily inflicted on the patient. Upon one occasion, I saw a doctor, who had done thousands of taps before, do a successful one only after five attempts. Another time an expert on cerebro-spinal lues entered the canal after eight attempts. They recognized neither dry taps nor the use of local anesthesia and just persisted till the tap was accomplished. Some of the patients were tied and others required three men to hold them during the procedure.

We began to use local anesthesia and defined certain landmarks that helped to perform a successful puncture. Infiltration of the skin alone, and of the skin and underlying tissues was tried. It was found necessary to anesthetize every layer, including the meninges, to perform a painless puncture.

The technique in detail is described below. The patient is always placed in a recumbent position on his right side so that his buttocks are to the left of the operator. The operator should sit on a chair or stool in as comfortable a position as possible. The back of the patient is prepared with tincture of iodine from the middle of the sacrum to the tenth dorsal spine and from the ilium above to the curve of the lumbar region below. One sterile towel is placed beneath the back. The patient is requested, and is assisted, to bend his back in the usual manner as much as is not incompatible with a fair degree of comfort. He is not held but something of what is to be done is explained to him in terms that he can understand. The probabilities of pain are made clear, and the request made that any beginning of pain be told of at once so that it may be relieved. The operator then selects either the third or fourth interspace, using these spaces alternately if punctures are to be repeated. The patient is told that he will be notified of every step as it is carried out. This prevents a certain amount of the attending nervousness and apprehension felt by every patient. Fulfill the promise. Tell the patient that he is to be touched with fingers only. Mark spot with finger. Fill

a two cubic centimeter hypodermic syringe with one per cent novocain. Use a small bore needle. Next tell the patient that he is to be touched with a needle but not stuck. Touch spot with the needle and then tell him that he will feel a slight prick, after which, if he feels pain again, he is to give notice at once and it will be relieved. The skin is infiltrated to the diameter of about two centimeters, the subcutaneous tissue injected, and a small amount of novocain placed directly between the spines as far as the small needle will reach. An ordinary luer needle about nine centimeters long and one and one-half millimeters bore is used for the remaining infiltration and puncture. This needle is passed through the skin and fixed in the subcutaneous tissue at a point exactly in line with the spinous processes and a little nearer the lower spine. The tips of the thumb and middle finger of the left hand are placed upon the lower and upper sacroiliac synchondroses respectively. Form an imaginary line between these points and raise the free end of the needle till the needle is at a right angle to this line, point the needle slightly toward the head of the patient, and slowly push directly inward, again using the syringe to infiltrate in front of the needle as it goes forward. In most instances it is easy to sense the meninges by touch. When the needle reaches the meninges, a last drop of solution is injected and the needle advances till the difference in resistance evidences that the tap is made. Remove the syringe and reject the first few drops of fluid, with which novocain from the needle is mixed. The tap then proceeds according to indications.

If the position described for the needle is obtained it is mechanically impossible to miss the canal unless the patient is deformed. It has the advantage that only one angle has to be calculated instead of two, as is the case when the needle is inserted to the side of the spinous process.

Some of the objections that have been advanced against this method are, that it requires too long a time; that it is unnecessary because the patient does not suffer and does not object to the puncture; that

the canal can always be punctured upon the first attempt; that the muscles, ligaments, and meninges have no nerves of pain-sense; that a needle without a stylet may be occluded by bone; that a needle without a stylet may be broken and the distal part lost; and that it is impossible to do a puncture without holding the patient. The time required is very little longer than without the anesthesia. In the saving of pain and increasing the chances of recovery of the patient, the element of time should not be considered. From observations and from the statements of not a few patients, we are convinced that some really suffer great pain. I have seen one case of acute dilatation of the heart followed by death as the result of struggles during a lumbar puncture. In the acute cases, local anesthesia relieved the patients' nervous fear of coming taps and of the physical strain of being held. We believe these to be two big factors in the treatment of meningitis. Many of the neuropsychiatric patients refused to believe that they had been stuck, although they were told it was being done. Patients in stupor or delirium were often tapped without being disturbed.

The method for locating the direction of the needle is especially helpful for beginners and for those whose skill is not beyond the need of landmarks. Local anesthesia is indicated as an integral part of the treatment of all acute cases requiring lumbar puncture, it is desirable in chronic cases because of its good mental effect, and it is only humane to use it in single taps.

CHARCOT'S JOINT ASSOCIATED WITH CONGENITAL SYPHILIS

A REPORT OF A CASE

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Dembo, Litchfield, and Foote, in a recent review of bone and joint changes state that bone lesions are not common occurrences in lues. They feel that this subject should be

discussed more frequently as the differential diagnosis of bone lesion is sometimes very difficult. As the most common lesions, they describe, epiphysitis, osteitis, painless hydrops articuli; periostitis including dactylitis and craniotabes.

Most of the syphilitic bone lesions usually occur during early childhood and the greatest portion probably appear during the first year of life.

Since the early lesions occur simultaneously with the common symptoms of congenital lues, it appears that little difficulty should be experienced in making a diagnosis, especially since laboratory tests and X-Ray may be uniformly employed in every suspected case of lues.

Fisher reports several cases of syphilitic bone and joint lesions simulating tuberculosis. Many of his cases were diagnosed clinically and roentgenologically as tuberculous. Most of his patients gave a negative reaction to the Wassermann test but anti-tuberculous treatment resulted in no beneficial effect. These patients were later given the routine anti-syphilitic treatment, which resulted in prompt recovery.

P. W. Roberts also reports a series of cases that were treated as tuberculous from a few months up to fifteen years. These patients showed no improvement until they were put on anti-luetic treatment. These reports of Roberts and Fisher and many others certainly prove the presence of a greater number of cases of bone and joint syphilis in childhood than were heretofore suspected.

The late or tardy manifestations of syphilis are of such character that occasionally they may be difficult to diagnose.

In reporting their series of cases Dembo, Litchfield and Foote do not make any mention whatsoever of the occurrence of Charcot joints in congenital luetics. Welborn states that Charcot's joint implies tabes dorsalis in ninety to ninety-five per cent; the remaining five to ten per cent in syringomyelia. Whitman states that this condition occurs in locomotor ataxia, which may begin before the onset of tabes and caused sometimes directly by injury. Poorman, Scott, Loeffler, and Krayn fully discuss dif-

ferent phases of syphilitic bone and joint diseases, but do not mention congenital syphilis as an etiological factor in Charcot's joint.

Butterworth states that he has at present a patient who came under his care when three years of age for a Charcot's joint of the left elbow. This case was very interesting for the reason that she has been X-rayed a number of times; an old fracture of the joint had been discovered and surgical measures for relief. The parents were loath to have her operated on and sought the services of an Osteopath who made matters worse. She then came to Butterworth for treatment and cleared up entirely on specific medication. Her blood Wassermann came back three plus.

This instance clearly demonstrates that this condition is probably more common than has been realized in the past. However, this lesion is of sufficient rarity and when associated with hereditary syphilis, warrants a full report in medical literature, since it appears that most of the writers associate Charcot's joint with tabes dorsalis.

Before reporting the case I wish to go very briefly into the etiology, symptomatology, pathology, and diagnosis of this condition.

Etiology—Erb states that ninety per cent of these cases are due to syphilis. Other writers mention alcohol, exposure, and traumatism as etiological factors.

Pathology—Whitman, in describing the pathology of Charcot's joint, writes as follows: "It resembles degenerative arthritis in that the cartilage degenerates with the underlying bone, both worn away by the movements of the limb; at the same time there is a formation of irregular and exaggerated cartilage and bone about the periphery of the joint; the synovial membrane is hypertrophied with calcareous plates in spots; the contents of the joint usually increase in amount. There is usually a luxation or sub-luxation of the joint."

Symptomatology—Onset usually with other symptoms of locomotor ataxia. The joint presents a laxity of ligaments and a deformity; practically no pain or sensitive-

ness; movements are much greater than usually.

Differential Diagnosis

1. **Arthritis deformans:** large boggy joint, coming on slowly with no tendency to ankylosis and no pain; distinctly different from arthritis deformans.

2. **Tuberculous arthritis:** negative history, negative fluid, X-ray negative to tuberculosis all aid in showing a distinct picture of Charcot's joint.

3. **Sarcoma:** the soft boggy condition and absence of pain; sarcoma is more confined to heads of bones rather than to joints. The duration of disease and metastases are important factors in differential diagnosis.

Case Report

On account of the rarity of the case I shall go into the history in detail.

Case number 51344; HP age 12, colored.

The patient was first admitted to the surgical clinic; a diagnosis of osteo-chondroma of the right elbow made and an X-ray ordered. The patient was then sent over to the pediatric clinic and the following notations were made.

Chief complaint: Patient complains of aching in a greatly distended and deformed right elbow with no loss of function.

Family history: Mother living and well; father living and well; four sisters and three brothers all living and well. (Patient came by himself and no further family history could be obtained).

Feeding history: Of no importance in this case.

Past history: Measles at six years of age, no complications, no sequelae. Typhoid fever 1920; stayed in bed five weeks and made an uneventful recovery. Influenza 1921; in bed one week; complete recovery.

Venereal history: Denies lues and gonorrhea. Patient states that as far as he knows he has never had any signs of acquired or congenital syphilis.

Present history: Six months ago patient fell on sidewalk and bruised his right elbow. A private physician attended him and prescribed for him several liniments but did not attempt to treat the case surgically or otherwise. Patient complained of no pain

at that time and noticed nothing abnormal about the joint for two or three weeks when the elbow suddenly began to swell and continued up to the present time. He has had pain at no time in the joint except on damp days. He has no loss of motion. The joint occasionally feels hot and on moving it he gets a crackling sensation. He has no other growths present so far as he knows. He has no signs of oncoming locomotor ataxia. His appetite is good. His health is as good as it was before the injury.

Physical Examination

1. **Appearance** Well built colored boy; appears to be about twelve years of age; robust and healthy and not acutely ill. Right elbow much enlarged.

2. **Head:** No bosses; no craniotabes; no alopecia.

3. **Eyes:** Pupils regular, react light and accommodation. No palsies.

4. **Ears:** Negative.

5. **Nose:** No necroses of bone or cartilage; no ulcers; no discharge.

6. **Teeth:** Regular. No Hutchinsonian teeth.

7. **Tongue and Tonsils:** Negative.

8. **Chest:** (a) Lungs—Negative.

(b) Heart—Negative.

9. **Abdomen:** Negative.

10. **Extremities:** Lower extremities present nothing abnormal.

11. **Upper Extremities:** Right elbow: Tremendous deformity; irregularly shaped. Greatest circumference thirteen and one-half inches as compared to eight inches for the left elbow. Complete freedom of movement; no pain either on touch or movement. At center of elbow there appears some fluctuation.

The elbow seems to show a lateral displacement of the humerus, but no fracture could be noticed.

Eloesser's Sign: Eloesser describes the following sign in cases of tabes complicated by Charcot's joints: on sticking a pin into Charcot's joint the skin seems to retain pain sense, but the latter sensation is lost in the periosteum. (This sign was negative in this case).

Special Examinations

Blood: (a) Microscopic examination re-



Two Views of Elbow. Charcot's Joint.



X-ray Pictures of Joint

vealed nothing abnormal.

(b) Wassermann—at first negative; after some anti-luetic treatment a report of the blood came back four plus.

Spinal fluid: Not under pressure, clear, cell count 12, Wassermann negative, no organism found; gold-collodial test not re-reported.

Neurological: Knee jerks present and not exaggerated; Romberg absent; finger to nose test normal. All other common tests

negative.

Ophthalmoscopic: Eye grounds were normal.

Urinalysis: Nothing abnormal was found.

X-Ray Report: Dr. James J. Clark makes the following report: The forearm is dislocated posteriorly and laterally upon the humerus. The humerus, just about and external to the capitellum is deformed, due to some bone destruction. Posteriorly to the humerus and fitting the capsule in this

area are many new masses of bone. Below the internal condyle there is more unorganized bone. The joint capsule is distended with fluid. Periosteal bone production is seen along the slough of the humerus, also along the upper outer third of ulna. This joint presents the characteristics and pathology associated with Charcot's joint, although I have never observed one in a child before.

Comment

This case is interesting for the following reasons:

1. Charcot's joint may be an associated lesion of congenital lues.
2. Very few cases of this sort are on record in medical literature.
3. Many of these conditions are diagnosed as new growths or tuberculous because the blood of the patient gives a negative reaction to the Wassermann test.
4. Trauma plays an important part in the exacerbation of these joint conditions.

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THE ORANGE SLIP

The orange-colored slip which you will find in this issue means much to the Association and your Journal. For the Association to meet its financial obligations promptly its affairs must be conducted in a business-like manner. Fill in the slip and forward it, together with your check, to the Secretary-Treasurer of your county society as promptly as you pay your telephone and grocery bills. This will help him send in a prompt and complete report. The Association's year begins January 1st and ends December 31st.

RECURRENCES IN CANCERS OF THE BREAST

Recurrence of cancer after a radical, thorough operation, according to John E. Summers, Omaha (Journal A. M. A., Sept. 15, 1923), depends on whether it is dominant or recessive; that is, the degree; and hence the expectation of late or early recurrence. Cancer in the human race is recessive; the non-cancerous tendency is dominant. Fibrosis and hyalinization of the tissues of a recurrent cancerous breast tumor indicate that in that particular individual the noncancerous tendency is relatively recessive; hence a favorable prognosis. Both are indexes of the necessities, extent and numbers of irradiations as aids to nonrecurrence. Whatever the cancer element or infective germ may be, there must be an inheritable predisposition, a fertile soil for the determination of the process, whether the local irritant is activated on the lower animal or on man. The propaganda of the Society for the Control of Cancer is bringing many cases of tumor earlier to the attention of the surgeon, particularly tumors of the breast. As a result there is surely a more hopeful outlook as to the cure of a greater number of cases of cancer of the breast. Summers does not agree with Slye that cancer cannot be a germ disease. That cancer growth and metastasis do not follow the laws of bacteriologic infections is no reason that it may not have its own law, as have others which we acknowledge but as yet cannot identify.

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Editorial Department**AN INSIDE VIEW OF THE DIFFERENCE
BETWEEN INVESTING AND
SPECULATING**

By Samuel O. Rice

Educational Director, Investment Bankers
Association of America.

The president of a young firm that manufactures biologic and pharmaceutical preparations was brought to me the other day by a mutual friend to obtain information as to floating a bond issue to finance his rapidly-growing business. The mutual friend, a man of sound judgment and high integrity, vouched for the manufacturer, his thorough honesty and capability. The manufacturer's clear and comprehensive reports told further that he had an excellent, well-managed, prosperous business.

"We've made a good deal of money," said the manufacturer, "and put it back into the business, but in spite of everything we can do, we are, every day, more and more behind in filling our increasing orders. We've grown rapidly in our few years of existence and can keep on expanding at the same rate, but our opportunities are so great that I

don't want to wait five or ten years in growing into them. We've got everything we need, except capital."

"Why don't you issue stock?" I asked. "You haven't anything to secure a bond issue properly, considering the large sum you need."

"I'd rather issue bonds," replied the manufacturer, "because I want to put every cent I can get into the business. It would cost at least 15 per cent, probably more, to put through a stock-selling campaign, naturally offering our stock to physicians and surgeons who know the value of our products. It would be much cheaper to issue bonds. Don't you see I'm trying to do everything for the best interests of the business? It's a safe proposition."

"Safe, as a good, fine business speculation," I answered, "but not safe as a bond issue. You haven't adequate security for a bond issue. Now, don't misunderstand my use of the term 'speculation.' By it I mean honest, competent, forceful and resourceful business enterprise, the thing that has built this country's prosperity. I don't mean gambling or wildecating. But every business, no matter how sound and worthy, faces risks. Persons who would put money into your business now would be taking risks. It would be a sensible, sound, fair risk, no doubt, to buy your stock. Your fine earning record and your apparent prospects indicate that you, in all likelihood, will pay handsome dividends. Your stockholders would be repaid for the risk in buying stock. They ought to have the reward. They would deserve it.

"But what pay would your bond holders receive for taking the same risk, if you could issue bonds instead of stock? You can't offer more than current rates of interest on long-time securities. You can't adequately secure the bonds."

"But I don't see where there's such a tremendously big risk in my business," objected the manufacturer. "Don't you believe my reports?"

"Absolutely I believe them. I think you are the kind of man who should be en-

couraged. I think your business achievements are splendid and your opportunities for development excellent. I think you have as fine and desirable a bit of speculation as I've seen in a year, and by speculation I mean the best kind of business enterprise. But your business and every other good business unavoidably faces risks, and you haven't any right to let bond holders incur such risks. I don't think one of your bond holders would lose a penny, but you haven't security that says that, and security is the thing that counts in a bond issue."

"You spoke of the advantages some of your patents give you over competitors. Suppose some competitor gets hold of patents superior to yours? That's easily possible, isn't it? Further, as you cut into the business of some of these large, old competitors who are firmly established and well financed they're going to give you a still harder fight. I don't believe anything like that will keep you from growing and prospering, but it might, and if it did, where would your bond holders be? They'd lose, wouldn't they? Yes, your stockholders would lose, too, but they would have taken the risk because of the large returns offered."

However, I passed the manufacturer's bond proposal on to members of the Investment Bankers Association of America without comment other than that I had thoroughly dependable information as to the manufacturer's high integrity and capability. His proposal was rejected. Subsequently he sold stock to several wealthy business men who saw the wonderful business opportunity the manufacturer had. They were men who could afford to take a fair business risk because of the greater reward offered. Had they been men of limited income, dependent on their own earnings I doubt if buying that stock would have been wise. Men of limited incomes who are dependent solely on their earnings should, in seeking to build up an independent income for themselves or their families, buy sound bonds. Only if they can afford to risk the possibilities of loss and to wait for dividends

can they afford to buy stocks and then only in good, honest enterprises.

The foregoing is one of the best examples of the difference between speculating and investing that I have seen in several months. Speculating is legitimate and desirable for men who can afford it, but you have noticed that, by implication at least, I have not included gambling and wildecating, buying and selling on margins as speculation for the average man. Speculating is buying stocks, or anything else, which the buyer has sound reason to believe, either from experience or from dependable advice, will be profitable. Of course, there is speculative selling, too, but for the average man who is not a trader, speculation consists usually in buying into some honest, sound, promising enterprise. Investing consists of putting money into something, usually bonds, that are so well secured that payment of principal and interest are assured. Buying wildecat oil, bying machine, automobile radio, patent device and other stocks at the invitation of a promoter whose integrity and business ability are not fully known is not speculating. It isn't even gambling. There's no risk about it—it is certain that the money is lost.

There is only one way for any man who is not a specialist in investment securities to invest safely and to speculate wisely. That is to deal with an investment banking house whose integrity and capability are proved.

October 16th, 1923.

Dr. Allen H. Bunce,
Secretary State Medical Association,
65 Forrest Avenue, City.

Dear Doctor:

On October 8, 1923, a civil case of malpractice was brought against me for \$10,000.

It was my pleasure to have Messrs. Bryan & Middlebrooks, Attorneys for the State Medical Association, defend me. I assure you that no one can appreciate this service unless they are confronted with such circumstances. This case was dismissed by the judge on Statute of Limitation. I feel that every case of like character that is won by a member of our Association

is indeed a victory for all, for there are far too many malpractice suits entered.

With very best wishes for the continued success of our Association, I am,

Yours very truly,

NEWS ITEMS

The numerous friends of Dr. L. Amster will be interested to know that he is back again after a two years' absence abroad. Dr. Amster has opened his office at 15 W. Alexander St., Atlanta, Ga.

Dr. J. H. Nicholson, formerly of Madison, Ga., is staying at the Covington Apartments, Philadelphia, Pa., while taking a post-graduate course at the University of Pennsylvania.

Dr. W. E. McCurry, Hartwell, Ga., left last month to take a post-graduate course in Internal Medicine at the University of Pennsylvania.

Dr. Cecil Stockard, eye, ear, nose and throat specialist, announces the removal of his offices to Suite 33, Doctors' Building, Atlanta, Ga.

Of interest is the return of Dr. Harry B. Nunnally, of Monroe, Ga., from New York, after having taken a special course in diseases of the eye, ear and throat. In the near future Dr. Nunnally is to be associated with Dr. G. D. Ayer, in Atlanta.

Through a committee headed by Dr. J. D. Applewhite and Dr. W. L. Moss, Athens has been selected as the site for the five-year clinic to be established in the Southeast by the American Child Health Association through the Commonwealth Fund, which amounts to \$250,000.

Lenwood Hospital, Washington, is to have new additions and improvements amounting to \$600,000.

The Rotarians of Savannah, with a committee consisting of Dr. A. J. Waring, Dr. Robert Drane and R. C. Brooks, are planning a clinic for the crippled children who are unable to receive attention from family physicians.

Grady Hospital, Atlanta, is to have two new clinics—one for the treatment of persons who are not bedridden, is being built with a \$50,000 fund left by Jacob Elsas, the other being the Albert Steiner Cancer Clinic, made possible through a legacy left by Mr. Steiner.

Dr. Cleveland Thompson, of Millen, was elected President of the First District Medical Society, held at Savannah. Dr. H. H. McGee, Savannah, was elected Vice President. Dr. E. C. Demmond, Savannah, Secretary-Treasurer, and Dr. Chas. Usher, Savannah, were not subject to re-election.

Dr. J. W. Jones, formerly of Millen, Ga., is now practicing at Thrift, Ga.

On October 12th there was organized in the New York Academy of Medicine "The American Association for the Study and Cure of Cancer." There were over 60 enrolled from eighteen different States of the Union and some from outside countries, as charter members.

Dr. L. Duncan Bulkley was elected President; Dr. Curtis Frank Claassen, of Brooklyn, Vice President; Dr. A. Hirst Appel, Colonel in the Medical Corps, U. S. (retired), Secretary and Treasurer; with an Executive Committee of five.

The next annual meeting will be held in Chicago, in May, during the meeting of the American Medical Association.

Dr. Nathaniel L. Spengler announces the opening of offices in the Stovall Building, Tampa, Fla. Practice limited to pediatrics.

Dr. S. A. Visanska has removed his offices from the Fourth National Bank Building to the Physicians' Building, Atlanta. Practice limited to pediatrics.

The Post-Graduate Clinic for the General Practitioner, given by the Bibb County Medical Society at the Macon Hospital, was held November 5 to 10, 1923, at Macon, Ga.

A medical meeting on Insulin and Diet in the Treatment of Diabetes was held in Birmingham, Ala., October 22-23, 1923.

The American Medical Editors' Association held its 54th annual meeting at the Auditorium Hotel, Chicago, Ill., October 25-26, 1923.

WANTED—Two internes (graduates of Class A Schools) at New York Polyclinic Hospital, New York City. Post graduate medical institution of 350 beds offering a general service in surgery, medicine and specialties for one year or more. Apply John M. Lawler, Medical Superintendent.

MARRIAGES

Of interest to many friends throughout the State was the marriage of Dr. Eugene Weatherly and Miss Lee Thruman. Dr. and Mrs. Weatherly are at home at Woodland, Ga., where Dr. Weatherly is a practicing physician.

OBITUARY

The friends of Dr. J. H. Crawford and Dr. E. B. Crawford, of Atlanta, will regret to learn of the death of their father, Dr. J. M. Crawford, of Weaverville, N. C., formerly a resident of Atlanta, October 7, 1923.

* * *

Dr. W. H. Harp, popular physician of Buena Vista, died in Cusseta, September 10, 1923, after a lingering illness of about twelve months. Dr. Harp is the father of Dr. Frank C. Harp, of Albany, Ga.

* * *

The death of Dr. F. H. Phillips, prominent physician of Harlem, on August 23, 1923, caused much sorrow to the people of Columbia and surrounding counties.

* * *

Dr. John H. Crawford, well-known physician of Martin, Ga., died at his home September 22, 1923, after an operation for appendicitis.

NEW AND NON-OFFICIAL REMEDIES

Arsphenamine-Squibb, 1 Gm. Tubes. Each contains 1 Gm. arsphenamine-Squibb (see New and Nonofficial Remedies, 1923, p. 49). E. R. Squibb & Sons, New York.

Arsphenamine-Squibb, 1.2 Gm. Tubes. Each contains 1.2 Gm. arsphenamine-Squibb (see New and Nonofficial Remedies, 1923, p. 49). E. R. Squibb & Sons, New York.

Ampules Pituitary Solution-Squibb, 0.5 Cc. Each contains 0.5 Cc. pituitary solution-Squibb (formerly marketed as solution of hypophysis-Squibb, see New and Nonofficial Remedies, 1923, p. 219). E. R. Squibb & Sons, New York.

Ampules Pituitary Solution-Squibb, 1 Cc. Each contains 1 Cc. Pituitary Solution-Squibb (formerly marketed as solution of hypophysis-Squibb, (see New and Nonofficial Remedies, 1923, p. 219). E. R. Squibb & Sons, New York.

Enteric Coated Tablets Neutral Acriflavine—"National," 0.0324 Gm. (1/2 grain). Each tablet contains 0.0324 Neutral Acriflavine—"National" (see New and Nonofficial Remedies, 1923, p. 25). National Aniline & Chemical Co., New York.

Ointment Neutral Acriflavine—"National." Neutral Acriflavine—"National" (see New and Nonofficial Remedies, 1923, p. 25) 1 per cent dissolved in glycerin, 8 parts, and incorporated with a base composed of hydrous wool fat and petrolatum to make 100 parts. National Aniline and Chemical Co., New York.

Pollen Protein Allergens-Squibb. In addition to the Pollen Protein Allergens-Squibb listed in New and Nonofficial Remedies, 1923, p. 241, the following have been accepted: Apple Pollen Allergen-Squibb; Black Walnut Pollen Allergen-Squibb; Cherry Pollen Allergen-Squibb; Dandelion Pollen Allergen-Squibb. E. R. Squibb & Sons, New York.

Group Allergens Diagnostic-Squibb. In addition to the Group Allergens Diagnostic-Squibb listed in THE JOURNAL, August 4, 1923, p. 393, the following has been accepted: Group Allergens-Squibb Type XXIII (Ash, Cherry, Maple, Oak, Poplar, Willow). E. R.

Squibb & Sons, New York (Journal A. M. A., September 1, 1923, p. 749).

Protein Extracts Diagnostic-P. D. & Co. In addition to the Protein Extracts Diagnostic-P. D. & Co. listed in The Journal, August 11, 1923, p. 477, the following have been accepted: Goldenrod Pollen Protein Extract Diagnostic-P. D. & Co. and Tobacco Protein Extract Diagnostic-P. D. & Co. Parke, Davis & Co., Detroit.

Thromboplastin-Lederle. An extract of cattle brain in physiological solution of sodium chlorid prepared according to the method of Hess. For a discussion of the actions, uses and dosage of brain extract see New and Nonofficial Remedies, 1923, p. 129, under Fibrin Ferment and Thromboplastic Substances. Thromboplastin-Lederle is marketed in 20 Cc. vials which bear an expiration date. Lederle Antitoxin Laboratories, New York. (Jour. A. M. A., September 15, 1923, p. 929).

Pollen Allergen Solutions-Squibb. Solutions containing the sodium chloride soluble proteins from isolated pollens of various species of plants. For a discussion of the actions, uses and dosage, see Pollen and Epidermal Extract Preparations and Biologically Reactive Food Proteins, New and Unofficial Remedies, 1923, p. 234. Pollen Allergen solutions-Squibb are intended for the prophylaxis and treatment of hay fever. They are marketed in the following forms: Set A: ten vials containing ten consecutive doses (Nos. 1 to 10); Set B: five vials containing five consecutive doses (Nos. 1 to 5); Set C: five vials containing five consecutive doses (Nos. 6 to 10); Set D: five vials of dose No. 10; Set E: five vials of dose No. 11. The following products have been accepted: Timothy Pollen Allergen Solution-Squibb and Ragweed Pollen Allergen Solution-Squibb. E. R. Squibb & Sons, New York.

Ragweed Pollen Extract-Swan-Meyers. A liquid obtained by extracting the dried pollen of ragweed with a liquid consisting of 67 per cent glycerin and 33 per cent saturated solution of sodium chloride. For a discussion of the action, uses and dosage, see

Pollen and Epidermal Extract Preparations and Biologically Reactive Food Proteins, New and Nonofficial Remedies, 1923, p. 234. The product is marketed in the following forms: Series 1: five vials containing five consecutive doses (Nos. 1 to 5); Series 2: five vials containing five consecutive doses (Nos. 6 to 10); Series 3: five vials containing five consecutive doses (Nos. 11 to 15); Complete Series: fifteen vials containing fifteen consecutive doses (Nos. 1 to 15). Swan-Meyers Co., Indianapolis.

Luminal Tablets, $\frac{1}{2}$ grain. Each contains $\frac{1}{2}$ grain luminal (see New and Nonofficial Remedies, 1923, p. 63). Winthrop Chemical Company, New York.

Malt Extract (Unmedicated)-P. D. & Co. A preparation essentially similar to extract of malt, U. S. P. (see New and Nonofficial Remedies, 1923, p. 177), but containing 10 per cent of glycerin. 1 Gm. of the extract converts 5 to 7 Gm. of starch to maltose and dextrin in thirty minutes at 40 C. Parke, Davis & Co., Detroit.

Malt Extract with Cod Liver Oil-P. D. & Co. Each 100 Cc. contains Norwegian Cod Liver Oil, 25 Cc. and malt extract (unmedicated)-P. D. & Co., 75 Cc. Parke, Davis & Co., Detroit.

Argyn Tablets, 6 grains. Each tablet contains 6 grains argyn (see New and Nonofficial Remedies, 1923, p. 330). Abbott Laboratories, Chicago.

Tablets Ovarian Substance-Wilson, 2 grains. Each tablet contains 2 grains ovarian substance-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Tablets Ovarian Substance-Wilson, 5 grains. Each tablet contains 5 grains Ovarian Substance-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Capsules Ovarian Substance-Wilson, 2 grains. Each capsule contains 2 grains Ovarian Substance-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Capsules Ovarian Substance-Wilson, 5 grains. Each capsule contains 5 grains Ova-

rian Substance-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Tablets Ovarian Residue-Wilson, 2 grains. Each tablet contains 2 grains Ovarian Residue-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Tablets Ovarian Residue-Wilson, 5 grains. Each tablet contains 5 grains Ovarian Residue-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago.

Capsules Ovarian Residue-Wilson, 5 grains. Each capsule contains 5 grains Ovarian Residue-Wilson (see New and Nonofficial Remedies, 1923, p. 212). Wilson Laboratories, Chicago. (Jour. A. M. A., September 29, 1923, p. 1113).

The Therapeutic Value of Type I Anti-pneumococcus Serum

The fundamental experiments on which the treatment of lobar pneumonia with serum are based, Arthur L. Bloomfield, Baltimore (*Journal A.M.A.*, Oct. 27, 1923), says show that after the infection has progressed beyond a certain point, no amount of serum will save the infected animal. Evidence is presented by Bloomfield which seems to show that an analogous state of affairs exists in pneumonia in man, and that the best indication that the case is still favorable for treatment is the absence of bacteremia and not the day of the disease. Furthermore, the mortality figures on this basis bring out, in a much more striking way, the therapeutic value of the serum than general gross mortality statistics. The occurrence of bacteremia in relation to the day of disease affords an index for prognosis in lobar pneumonia. As long as the blood culture is negative, spontaneous recovery is possible in the majority of cases. In Bloomfield's series, the percentage of recoveries of patients treated with serum at a time when the blood culture was negative was 100, regardless of the day of disease. It is believed by him that his study reinforces the view that Type I antipneumococcus serum is of real value. The serum appears indicated in all cases, regardless of the day of disease, save those in which an overwhelming bacteremia is present.

Before and When the Baby Comes

Life holds no greater happiness than motherhood. But, unfortunately, this supreme joy cannot be achieved without some risks. Many of these risks, however, are avoidable if only we will condescend to face the problems seriously and cheerfully and will apply the knowledge that is now at hand. According to Dr. Charles B. Reed in the November issue of *Hygeia*, who outlines some of the dangers and the means of meeting them, the maternal death rate in the United States is increasing rather than decreasing. Sixty per cent of this mortality is from preventable causes. If more mothers and babies are to be saved we must develop a program for care before and adequate care during confinement. The prospective mother should consult her physician early and often. Think of the waste, of the sorrow and suffering that indifference entails.

The Differentiation of Normal and Pathologic Human Thyroid Glands by Serologic Methods

Experiments were made by W. I. Terry and H. C. Shepardson, San Francisco (*Journal A.M.A.*, Oct. 27, 1923), to determine whether or not the substances secreted by the abnormal thyroid gland varied to any extent from the secretions of the normal gland. The complement-fixation reaction was selected. Extracts made from normal thyroid glands of pigs were injected into rabbits, and the serum thus obtained was found to be capable of deviating complement in the presence of homonymous antigen. Extracts made from normal human thyroids were found to react in a manner similar to the extracts obtained from normal pig thyroid gland. Extracts were then made from pathologic human thyroids, adenomas being selected because of the ease with which normal glandular tissue could be removed. The serum obtained by injecting the latter extracts into normal rabbits was likewise found to be capable of fixing complement in the presence of the homonymous antigen. The results so far obtained indicate a demonstrable difference in the extracts of normal human thyroids and those of adenomas.

BOOKS RECEIVED**A MANUAL OF THE PRACTICE OF MEDICINE**
(Eleventh Edition, Entirely Reset)

"A Manual of the Practice of Medicine," by A. A. Stevens, M.D., professor of Applied Therapeutics in the University of Pennsylvania. Eleventh edition, entirely reset. 12 mo. of 645 pages, illustrated. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$3.50 net.

A PRIMER FOR DIABETIC PATIENTS
(Second Edition, Reset)

"A Primer for Diabetic Patients." A brief outline of Diabetic treatment, including directions for the use of Insulin, sample menus, recipes and food tables. By Russell M. Wilder, M.D., Mary A. Foley and Daisy Ellithorpe, Dietitians, The Mayo Clinic. Second edition, reset. 12 mo. of 119 pages. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$1.50 net.

GYNECOLOGY
(Third Edition)

"Gynecology," by William P. Graves, M.D., professor of Gynecology at Harvard Medical School. Third edition, thoroughly revised. Octavo volume of 936 pages with 388 halftone and pen engravings and 146 microscopic drawings, 103 of the illustrations in colors. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$9.00 net.

PRINCIPLES OF VITAL STATISTICS

"Principles of Vital Statistics," by I. S. Falk, Ph.D., Department of Public Health, Yale University. Octavo of 258 pages, illustrated. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$2.50 net.

**A TEXT-BOOK OF ANATOMY AND
PHYSIOLOGY**

"A Text-Book of Anatomy and Physiology," by Jesse F. Williams, M.D., professor of Physical Education, Teachers' College, Columbia University, New York City. 12 mo. of 523 pages with 369 illustrations. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$3.00 net.

**PHYSICAL EXAMINATION AND DIAGNOSTIC
ANATOMY**

"Physical Examination and Diagnostic Anatomy," by Charles B. Slade, M.D., formerly Chief of Clinic in General Medicine, University and Bellevue Medical School. Third edition, thoroughly revised. 12 mo. of 179 pages, illustrated. W. B. Saunders Co., Philadelphia and London. Cloth, \$2.00 net.

CLINICAL DIAGNOSIS
(Fifth Edition)

"Clinical Diagnosis." By laboratory methods. A working manual of Clinical Pathology, by James Campbell Todd, M.D., professor of Clinical Pathology, University of Colorado. Fifth edition, enlarged and reset. Octavo of 762 pages with 325 illustrations, 29 in colors. W. B. Saunders Co., Philadelphia and London. Cloth, \$6.00 net.

THE EXAMINATION OF PATIENTS

"The Examination of Patients," by Nellis B. Foster, M.D., Associate Physician to the New York Hospital; Associate Professor of Medicine at Cornell University, College of Medicine. Octavo of 253 pages, illustrated. W. B. Saunders Co., Philadelphia and London: 1923. Cloth, \$3.50 net.

The New Competition



ANY progressive manufacturers and merchants say that the cut price bait is losing its attraction. They are paying less attention to this method of getting more business, and more attention to the idea of quality merchandise service. They believe the results so far achieved justify the statement that their customers will be better served and their own profits enhanced by giving more attention to quality, and less to price.

Real service is what counts. While many people will shop about for prices, the great majority are better satisfied with quality merchandise and good service at a fair price. This makes for confidence—the cornerstone of satisfaction.

Mr. Charles Wesley Dunn, Counsel for a number of large manufacturers in this country, has given this problem a great deal of thought. His conclusion is that we are now approaching the time when real competition will be in merchandise and service rather than in price.

As a nation, we have developed to the highest degree the science of quantity production. Now, with characteristic American progression, it is only natural that we are experiencing a very definite trend toward the development of quality production.

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Volume XII

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Number 12

TRAUMATIC CYST OF THE BRAIN*

Charles E. Dowman, M.D.

Atlanta, Ga.

The following cases of traumatic cysts of the brain are reported for two reasons; namely, because of the very interesting and instructive localizing symptoms, and secondly, because their occurrence could probably have been prevented had they been handled somewhat differently at the time of injury.

CASE 1. L. R., Sgt., U. S. A., was transferred from Neurological Hospital No. 1, Zone of Advance, France, to Mobile Hospital No. 8, on October 18, 1918. On September 26, patient was struck by several small fragments of an exploding shell, one fragment piercing his helmet, causing a small wound over right parietal region. Did not lose consciousness. Was admitted to Neurological Hospital No. 1 on October 1, 1918, on account of mental confusion. On October 2 he had a convulsion, beginning with jerking of left arm and leg. Examination gave exaggerated deep reflexes and unsustained left ankle clonus. Otherwise negative. October 14 began to have severe headaches. On October 17 no neurological findings excepting a sluggishness of the left superficial epigastric, abdominal and cremasteric reflexes, an indistinctness of the margins of the optic discs and a pulse which varied from 48 to 60 per minute. The diagnosis when patient was admitted to the Neurological Hospital was psychoneurosis of the hysterical type. When the discs began to show a beginning choking it was decided to transfer the patient to Mobile Hospital No. 8, where surgical head cases were being treated.

October 18, 1918, I first saw patient and on examination elicited the following findings: Right pupil slightly larger than the left; bilateral choked discs with small hemorrhages in the right retina; a paresis of emotional movements left side of face; a left adiadokokinesia; and a partial loss of joint sense of left hand. There was a small healed scar c. m. long right parietal region. X-ray examination disclosed a small foreign body, 2 x 3 m.m. in size in the right parietal lobe. A diagnosis of traumatic cyst of the right parietal lobe was made. Operation was performed immediately and a hemorrhagic cyst the size of a hen egg was located and evacuated of its contents. Patient made an uneventful recovery and all neurological findings gradually cleared up.

CASE II. H. I., a man, 36 years old, was referred to me by Dr. Lewis Gaines, on October 4, 1922. On September 11, 1922, patient received a stab wound in the left temporal region. He was rendered unconscious immediately and remained so for two weeks. After consciousness returned, it was discovered that he had a definite aphasia and a complete right hemiplegia. About October 1 he is said to have moved slightly his arm and leg. An examination by Dr. Gaines on October 4 gave the following positive neurological findings: Complete motor paralysis of right leg and right arm; partial paralysis of right side of face; a marked motor aphasia; a partial auditory aphasia; a definite inability to recognize objects or demonstrate the use of objects; marked irritability; left pupil slightly larger than the right; and an absence of superficial abdominal reflexes on the right side. The X-ray examination disclosed an indefinite shadow in the region of the left third frontal convolution. A

*Read before the Medical Association of Ga., May 2-4, 1923, Savannah, Ga.

diagnosis of traumatic cyst of the brain was tentatively made.

An operation was performed on October 6, 1922. The findings were as follows: An organized sheet of old blood clot under the dura at the site of the injury. This measured approximately 3 c.m. in diameter. Under this sheet of organized blood clot was a large accumulation of cerebrospinal fluid, having the appearance of a true arachnoid cyst. There was an old healed wound of the brain cortex and two spicules of bone were found embedded in the brain cortex. The organized tissue was removed, thus allowing the escape of the encysted subarachnoid fluid. As soon as the fluid was thoroughly evacuated the brain began to pulsate and all evidence of increased pressure disappeared.

RESULT: The patient made an uneventful recovery from the operation, and was discharged from the hospital eight days after the operation. Three days after the operation he began to speak fairly well. On the fourth day he began to move the right arm and hand, and by the seventh day almost complete function had returned in the right arm and hand. On the sixth day he moved his right leg. On the third day the right facial paralysis had disappeared. On January 24, 1923, patient was examined. He was able to walk with a slight limp of the right leg. There is a moderate degree of residual spasticity on the right side which is more marked in the leg than in the arm. The right foot shows a typical drop-foot position. The deep reflexes were slightly increased on the right side. There was no aphasia either sensory or motor, and no word or object blindness. There was no paralysis of the right side of the face. The right pupil is slightly smaller than the left.

CASE III. H. M. W., a man, age 29 years, was referred to me by Dr. Lewis Gaines, and admitted to the Wesley Memorial Hospital on February 15, 1923. October 11, 1919, patient received a stab wound in the right parietal region, the knife blade breaking off and remaining in the brain. Immediately after the injury it was noted that he had a complete left hemiplegia, including the face, arm and leg. He was operated upon a few hours later by an excellent general surgeon, who removed the

skull for a diameter of $2\frac{1}{2}$ c.m., opened the dura for an area corresponding to the removed bone, and extracted the knife blade. No effort was made, however, to debride the track of the knife. About two weeks after the operation patient began to regain the use of the left arm and left leg. This improvement continued up to August, 1921, since which his paralysis has been practically stationary. In March, 1920, patient began to have typical Jacksonian epilepsy with jerking of the left side of the face, left arm and left leg. These attacks were not accompanied by unconsciousness. They have occurred at fairly frequent intervals ever since and seem to be getting more and more frequent. Patient likewise complains of a severe headache and a dimness of objects on his left side.

An examination gives the following findings: A defect in the skull $2\frac{1}{2}$ c.m. in diameter, right parietal region, at about the level of the arm area; marked protrusion of the underlying brain; a partial left homonymous hemianopsia; the right pupil slightly larger than the left; a paresis of the left facial muscle; a spastic paresis of the left arm and left leg; a left astereognosis; a loss of joint sense left; and a loss of sense of position of the left arm and left leg.

On February 15, 1923, an operation was performed. Dense adhesions were found to exist between the brain cortex and the overlying scalp in the region of the bone defect. A large cyst of the parietal lobe measuring fully 5 c.m. in diameter and containing clear fluid was found to be present. The contents of the cyst were evacuated and the cyst lining partially removed. The bone defect was obliterated by means of a celluloid plate. The patient made an uneventful operative recovery and left the hospital one week after operation. On April 9, 1923, patient came in for observation. There have been no convulsions since the operation. All headaches have disappeared, the wound is nicely healed and the bone defect has been completely obliterated. There remains, however, a definite paresis of the spastic type of the left side of the face, left arm and left leg, although patient is able to walk with a definite limp.

CASE IV. C. A., a man, age 38 years, was admitted to the hospital on October 12, 1922, with the following history: On October 5,

1919, patient was struck by a bullet which first went through the soft part of the left shoulder region and then struck the left parietal region of the skull, causing a fracture but not entering the brain. He was operated upon immediately by his attending physician, the depressed bone fragments being removed. This left a bone defect approximately 2 x 3 c.m. in size. Following this injury patient continued to have a numbness in the right side of his body and his right arm. In April, 1920, he had a Jacksonian epileptic attack with marked twitching of the right arm and hand. A second similar attack occurred on September 1, 1921, and has been repeated two or three times a day ever since. The attacks usually last about ten minutes. Following the attacks of twitching of the arm patient has a dull pain in the arm and extending over the right scapular posteriorly. The pain usually lasts about twenty minutes. Examination disclosed a horseshoe-shaped scar in the left parietal region, a marked depression in the left parietal region 2 c.m. below the midline and about midway between the occiput and glabella. All cranial nerves seemed normal. Sensation to pin prick present, but greatly diminished over the left arm and hand. Patient has a right astereognosis and a disturbance of joint sense in the right hand. Also, a disturbance of sense of position of the right arm and right leg. There is a definite weakness of the right arm and right leg, and a marked awkwardness of movements of these extremities. The deep reflexes are more active right than left. The diagnosis of lesion of the right parietal lobe was made. It seemed from the examination that the lesion was probably destructive in the post central region, particularly of the arm area, and irritative to the pre-central or motor region, as evidenced by the Jacksonian attacks.

On October 18, 1922, patient was operated upon under local anaesthesia. A bone defect 2 x 3 c.m. was present, and there were dense adhesions between the brain and underlying scalp. A cyst fully as large as a turkey egg was in that part of the brain underlying the bone defect. In dissecting away the scalp from the brain a small encysted piece of bone was found surrounded by a small quantity of pus. An effort was made to dissect out this infected

area without contaminating the exposed brain. The large cyst was then opened freely and the lining partially removed. The bone defect was then obliterated by means of celluloid plate.

POST OPERATIVE COURSE: On October 22, patient began to have repeated attacks of twitching of the right hand and muscles of the right side of the face. These were eventually controlled with Luminal. On October 26, a fluctuating swelling in the operation area was punctured with a needle and 30 c.c. of thick pus withdrawn. A culture of this pus gave the presence of staphylococcus aureus. An incision was therefore made at the edge of the operation area so as to establish drainage, and a 5% solution of Dichloramine-T in oil was instilled daily. On October 31 the infection had practically cleared up, patient had regained better use of the hand and arm, and there was no further evidence of twitching. On November 4 patient was discharged in excellent condition. He has been seen at intervals during the past five months. The wound is well healed, he has had no more Jacksonian attacks, although he has had no medication whatsoever to control the attacks, and his general condition is excellent. There continues, however, to be an astereognosis and a loss of joint sense in the right arm and hand.

CASE V. G. D., a man, age 25 years, was admitted to the hospital on January 23, 1923. The history is as follows: Three days before admission patient was stabbed in the left temple region. Was drunk at the time. He was brought immediately to the out-patient clinic in what seemed to be a drunken state, his head was dressed and he was turned over to the policeman who had arrested him, and taken to jail. He remained in jail one day, when he was discharged and was taken home by his wife. At this time, according to reports, he seemed to be normal in all respects. The day before admission he went into a condition of coma and was brought into the hospital in this condition.

On examination, patient was unable to answer questions, as he could not be aroused and seemed to be in a semi-conscious condition. There was a wound of the scalp in the region of the left temple which seemed to be healing. An X-ray examination was made and no evi-

Svidence of fracture reported. Patient seemed to be generally spastic. Knee-jerks were highly exaggerated both right and left. All spinal fluid findings, however, were normal. Examination of the eye grounds gave normal discs, though the retinal veins seemed to be slightly engorged. HB. 90%. Leukocytes 9,500. Differential count: P.M.N. 68%, S.M.N. 23%, L.M.N. 7%, Trans. 2%. On the day following admission patient could be slightly aroused on repeated stimulations. Seemed unable to articulate, though was apparently able to understand what was said to him when it was repeated several times. Blood pressure 120 systolic, 80 diastolic. On January 31 patient continued in a condition of semi-lethargy. On being aroused he seemed to understand some questions, but was unable to say anything. The wound in the left temple region was apparently healed. Both legs were very spastic, the knee-jerks highly exaggerated and there was a bilateral Babinski reflex. On February 16 the lethargy was much less marked. The examination was practically negative excepting that patient was unable to answer questions intelligently, although able to talk. For example, he insisted that he was in the Civil War and was wounded. He then corrected this and said that he was in the war and wounded in 1922, but he does not remember the exact date, neither does he know what the present date is. He said that he worked for a Mr. Castor Oil who is a brother of Mr. Linseed Oil. He was able to be up and about, and through gestures conveyed the impression that he wished to go home. He was therefore discharged with directions to report to the Neurological Clinic for observation. At the time of his discharge there seemed to be a distinct motor aphasia and an agraphia. All other neurological findings seemed normal. On March 1, 1923, patient was readmitted on account of a very definite motor aphasia, and marked headaches which had been present for about a week and seemed to be growing worse. With the exception of the motor aphasia and a definite engorgement of the retinal veins, the neurological examination gave practically normal findings. A diagnosis of possible traumatic cyst in the left fronto-temporal region was made, and operation advised.

On March 2, 1923, patient was operated

upon. A small opening was found in the skull in the left temple region, having been caused by the knife blade. There was a corresponding slit in the underlying dura and the brain cortex was adherent to the dura in this region. A ventricular puncture needle was inserted into the brain and at the depth of $1\frac{1}{2}$ c.m. a definite resistance was encountered. This was interpreted as being the capsule of a cyst. The needle was therefore inserted through this resistance, and fully one ounce of brownish red viscid-like cystic contents was evacuated. Before evacuating this cyst the brain was evidently under increased pressure. After evacuation of the cyst the pressure was apparently relieved.

POST OPERATIVE COURSE: Uneventful. The wound healed by primary intention. The headache disappeared following the operation, and there was a definite improvement in the aphasia. On March 15 the patient was discharged from the hospital. The discharge note was as follows: "Patient improved after operation. Is able to call the names of some objects that he could not call before the operation. The aphasia which was of a motor type has cleared up to a fair extent. Patient has a jovial disposition, which was not the case before the operation."

SUBSEQUENT NOTES: Patient was last seen on March 19, 1923. There are no headaches, and the aphasia has practically cleared up entirely. No other abnormal neurological findings.

In regard to the type of treatment which would probably have prevented the occurrence of these traumatic cysts of the brain, I wish to emphasize the principle of debridement employed in the handling of traumatic head cases during the recent war. An operation at the time of injury should be performed in all cases where localized brain contusion is suspected. The operative procedure consists of exposing the injured area and carefully removing contused brain and blood clots by means of catheter suction. If this is thoroughly done a satisfactory healing of the brain wound should be expected. If, on the other hand, contused brain and blood clots are allowed to remain, there is apt to occur a liquefaction through the action of enzymes with a resulting cyst. Such

a cyst is liable eventually to give rise to the same symptoms as may be caused by brain tumor, and demand late operative treatment as illustrated in the reported cases.

REGIONAL ANAESTHESIA*

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Regional anaesthesia is the induction of anaesthesia in the different regions of the body by the use of agents ordinarily used for local anaesthesia and without the use of inhalation narcosis. It must not be confused with local anaesthesia as originated by Professor Reclus of Paris and practiced for many years more particularly in minor operations.

Local anaesthesia consists in infiltrating along the line of incision the tissues upon which it is proposed to operate, with a weak solution of the anaesthetic, infiltrating each layer as it is approached until the site of the operation is reached. This procedure usually resulted in unsatisfactory anaesthesia, except in very minor operations, and much time was lost in stopping to infiltrate the various layers.

Regional anaesthesia differs widely from local anaesthesia. Instead of applying the anaesthetic to the terminals of the nerves, it is injected at the point of origin, or along the trunk, so that the whole region supplied by the nerve and its branches is anaesthetized. It differs from local anaesthesia in that the anaesthetic fluid is never injected along the line of incision or within the structure of the surgical wound, and consequently does not interfere with the healing of the wound.

Regional anaesthesia is produced by the use of two different types of procedures—

1. Field Block,
2. Nerve Block.

Field Block consists in creating walls of anaesthesia encircling the operative field. The solution is injected fan-wise in certain definite planes of the body so as to soak all the nerves crossing these planes on their way to the operative area. Sometimes one single wall blocks the desired area.

Nerve Block consists in making injections

into or around the nerves which supply the field of operation. The solution may be injected near the spinal column where the nerve leaves the cord through the intervertebral foramen, called paravertebral anaesthesia; through the posterior sacral foramina called trans-sacral anaesthesia; into the sacral canal after the termination of the cord and outside of the dura, when it is called caudal anaesthesia. In practice often a combination of Nerve Block and Field Block is used. If, of course, the anaesthetic solution is placed inside the dura we have spinal anaesthesia, which will not be considered here.

In order to successfully carry out regional anaesthesia, the nerve trunk must be blocked. Obviously, a thorough knowledge of the descriptive and topographic anatomy of the region, more especially of the distribution of the nerve trunks, is essential. Without this, one cannot hope to be successful in the application of regional anaesthesia.

Advantages

In order to appreciate the advantages of regional anaesthesia, it must be compared with general narcosis, as this is the method commonly in use today for the performance of major operations. Regional anaesthesia possesses certain decided advantages over general narcosis.

1. It is not dangerous to life—no death has yet been reported as due to the use of regional anaesthesia. Formerly, when cocaine was used, there were many accidents, but since its replacement by the less toxic substances, such as novocaine, these accidents have been abolished.

2. Shock is much diminished as has been pointed out by Crile, who practices local and regional anaesthesia in his major operations, even when employing general narcosis.

3. The absence of pulmonary complications is also marked. Asphyxia such as happens during the administration of ether and chloroform, and the pneumonias due to inhalation narcosis, of course, never occur.

4. The absence of post operative nausea and vomiting is enough to recommend it to all those who have undergone this distressing post anaesthetic condition.

5. The fear of a general anaesthetic with

the dread of losing consciousness is very marked in some patients. We have had some who refused operation if general anaesthesia was necessary, and yet were only too glad when regional anaesthesia was suggested, to go on with the operation.

6. Adrenalin, which is a component part of the anaesthetic solution, contracts the blood vessels and shortens the operation by obviating the necessity for hemostasis by clamp or ligature.

7. The absence of the apparatus of the anaesthetist in head and neck cases, leaves the field clear for the surgeon and asepsis is facilitated.

8. In abdominal surgery regional anaesthesia always gives complete relaxation of the abdominal muscles. This is not always the case with general narcosis.

Disadvantages

The disadvantages of regional anaesthesia can all, I believe, be met by the skill acquired by practice. The chief arguments advanced against its use are:

1. That special training is necessary to insure success. This is true, but it is true of all other surgical procedures, and a short period of practice on the cadaver with the use of India ink in the syringe will enable the operator to check up his results by dissection. It is surprising to find how quickly the technique can be acquired.

2. That there is necessary more gentleness and skill in the operative technique as the pulling and tearing of tissues causes some discomfort on the part of the patient, but after all, is this an argument against regional anaesthesia? It seems far better to use sharp dissection scalpel and scissors in preference to tearing the tissues in any instance, and if this form of anaesthetic aids in improving operative technique it would appear to be an advantage rather than a disadvantage.

3. That the method produces only partial anaesthesia. This is chiefly due to lack of proper technique, although it must be admitted that occasionally a patient will be found upon whom the anaesthesia will not work successfully. These are chiefly the extremely nervous class, in whom all sensation is interpreted as pain, and who begin to complain as soon as the first skin wheal is made. But how easy it is

to give these patients a small amount of gas or ether, and much less of the anaesthetic is required in patients upon whom regional anaesthesia has been carried out than when giving general narcosis alone. This has been brought out by Crile.

4. That it prolongs the time of operation if the surgeon has to give the anaesthetic and then to operate. There is no more reason why the surgeon should give regional anaesthesia than ether. His assistant could easily be trained in the technique and could start twenty or thirty minutes ahead, just as in the case of general narcosis, and when the surgeon was scrubbed and ready the patient would be anaesthetized. If the anaesthesia is properly carried out it is not necessary to use more injection during the course of the operation.

It seems that all of the so-called disadvantages may be overcome by good technique. They are certainly not insurmountable and even in the very small percentage in which the anaesthesia fails, and generally fails only partially, it is very simple to supplement it with a few whiffs of gas or ether.

Indications

While regional anaesthesia is applicable to fully 80 per cent of all surgical operations, with the present technique, its most notable successes lie in those regions situated above the diaphragm, in the genito-urinary system, and in rectal, perineal and vaginal operations. This leaves only the abdominal cavity and the lower extremities. Even here regional anaesthesia may be carried out, but it is more troublesome than in the other regions.

In the abdominal cavity the greatest drawback is the difficulty of blocking the splanchnic nerves at the coeliac plexus. A new technique is being developed, however, which bids fair to overcome this difficulty. It must be remembered that the abdominal organs are not sensitive to touch, and that any sort of cutting or crushing operation may be carried out without any anaesthetic at all, but that traction upon these organs does cause discomfort through pulling upon the parietal peritoneum. Where no adhesions are present and the organs can easily be delivered without traction, regional anaesthesia is eminently satisfactory.

The difficulty in the lower extremity lies in

the fact that unlike the upper extremity, where the nerve trunks leave in a compact mass, the brachial plexus, easily injected from one point, the trunks of the lower extremity leave at different points on the circumference of the thigh. The femoral lies in front, the sciatic behind, and the cutaneous nerves are scattered between these trunks. With care and time these nerves may be successfully blocked, though the procedure is not nearly so easy as in the case of the upper extremity.

There is not time here to go into the technique of regional anaesthesia, and this may be readily found in the several excellent monographs on the subject that have recently been published. Suffice it to say that the technique is not extremely difficult to acquire and that a few hours spent in acquiring the fundamentals and in the application of it to actual cases will amply repay the one who tries it and convert into enthusiasts many of the skeptics.

It might be interesting here to mention a few of the major operations in which this form of anaesthesia has proved itself as fully satisfactory as general narcosis with the added advantages which have been referred to in the beginning of this paper.

It is safe to say, I believe, that there is no operation upon the head and neck in which it may not be applied, for the cutaneous and all the sensory cranial nerves are accessible. In all the operations performed by the specialist in eye, ear, nose and throat, including mastoidectomy; in operations upon the skull and brain, decompressions, brain tumors and abscesses, resection of the sensory root of the Gasserian ganglion; in operations in the region of the neck, thyroidectomy and laryngectomy, perfect regional anaesthesia has been obtained.

Thoracic surgery has made enormous strides largely aided by superior technique in paravertebral anaesthesia, and in this field thoracotomy for the relief of empyema, bronchiectasis, chronic tuberculosis and lung abscess has been carried out with increasing frequency and success.

Nephrectomy, prostatectomy, the repair of hernias, hemorrhoidectomy, the repair of tears of the cervix and perineum are all operations in which, in most cases, regional anaesthesia works beautifully, and when the post opera-

tive suffering of the patient is taken into consideration, almost takes them out of the field of general narcosis.

In the upper extremity, if the brachial plexus is blocked, an operation of any severity below the shoulder joint may be done with less shock than if general narcosis had been used.

In our clinic most of these operations have been performed under regional anaesthesia and with one regard to the nervous state of the patient, it is our method of choice if the consent of the patient can be had. We believe there is a large field for regional anaesthesia and that with increasing experience, wider usage, and improvements in technique, it will to a large extent replace general narcosis.

DISCUSSION ON THE PAPER OF DR. HUGH N. PAGE

Dr. J. L. Campbell, Atlanta.—Regional anaesthesia is a subject in which I am very much interested, and I have been doing some work along this line for the last three or four years, and I have gotten most of my technical knowledge from Dr. Sherwood Dunn's excellent book. In the first place, as Dr. Page said, a knowledge of regional anatomy is absolutely necessary. I may have a little advantage of a good many surgeons from the fact that I taught anatomy twenty years in Emory University and am fairly well acquainted with the anatomy of the human body.

Paravertebral anaesthesia is not a difficult procedure, and any operation on the chest can be done very comfortably to the patient and with satisfaction to the operator with paravertebral anaesthesia.

The essayist did not go into the technic, and it is unnecessary because you can find it in all textbooks. It takes a longer time to do the work. The work has to be done with a little more care, but it is well worthy of the care you bestow on it. Supposing you do a radical operation for cancer of the breast, it is one operation where great care should be exercised in the manipulation, and with paravertebral and regional anaesthesia you must anesthetize the brachial plexus as well as the paravertebral area from the third to the eighth intercostal nerves. You can get along so long as you do not pull or stretch or tear roughly the structures. When you begin to do that you give the patient pain, no matter what kind of paravertebral anaesthesia you have. That procedure increases shock and should never be done if the patient is thoroughly anesthetized. I have done five complete operations on the breast with regional anaesthesia, and I never put a patient to

sleep now to do a simple enucleation of the breast that can be done without paravertebral anesthesia, but by simply injecting the intercostal spaces sufficiently with a quantity of novocain solution, if you need anything at all but the ligation of the intercostal nerves, you can anesthetize the area perfectly, and there is very little infiltration. With one and a half to one per cent. solution you can make the patient comfortable. Many patients go to sleep because you have given them morphin beforehand.

As to nausea and vomiting occurring following regional anesthesia, just as after any general anesthetic, that is due perhaps to the fact that the morphin; atropin and hyoscin you give prior to the operation causes postoperative nausea, and they have just as much postoperative pain, and so on, as if they had a general anesthetic. In operating on hemorrhoids, patients seem to have more postoperative pain, but that has to be reckoned with and it can be controlled by the morphin.

In operations about the face, mouth and head, it is very essential to combine a little rectal anesthesia with your regional or local anesthetic. If you will follow out the instructions of Gwathmey and give oil and ether anesthesia by the rectum for an hour or half an hour before the anticipated operation, you will be gratified with your local anesthetic. Of course, the patient will go to sleep during the operation and feel very little discomfort. I think it is a great improvement in a certain class of patients, especially patients who may have some condition that contraindicates the use of a general anesthetic.

Dr. W. E. Person *Atlanta*.—Regional anesthesia is a subject that will occupy more of our attention as we become more familiar with it. Local anesthesia requires careful operation and requires diagnosis before operation. It does not lend itself to the rough and ready surgeon who aims at speed more than thoroughness.

Dr. Page covered very thoroughly anatomically the operative part of the technic and the anatomical arrangement of the parts necessary, but there are other parts you must consider, and among them the patient. There are some patients who are bad subjects for local or regional anesthesia. They need no special work on your part. Another large class of patients can be made amenable to treatment by the influence of the surgeon and the effect of his personality, and a considerable part by the judicious use of morphin previous to operation. Quite a number of patients are not fit subjects for local anesthesia because they will not be inclined to take it. They have such a fear that the results are very unsatisfactory. There is a great help when you resort to local anesthesia in what Farr calls the morals of the anesthetic, and that is, have some one talk to the patient while operating on him. Take a half scared man or woman you are going to operate on and have

some one carry on a conversation with the patient. It is a good thing to have some one occupy the attention of the patient while you are concentrating on what you are going to do, and then the fear that you are going to hurt will largely disappear. It is like the fear that a great many of you have when a dentist opens an abscessed tooth with a live nerve. It is the same under local or regional anesthesia. You have to keep the mind free from the possibility that the operation is going to hurt. There is one feature about it that I do not see why it is not used more than it is, because the fascia and nerve supply of this region is exceptional. I refer to any manipulation of the upper extremity. I have reduced fractures and done amputations with perfect success under regional anesthesia. The brachial plexus can be easily blocked. When you are in the neighborhood of blood vessels, if you use a small needle there is no danger, because if you inject novocain into a blood vessel you will get toxemia, if you puncture a blood vessel with a small needle. In splanchnic anesthesia I have punctured the vena cava with no untoward results.

In blocking the nerve supply in the region above the clavicle, blocking it at the elbow and above the wrist, you can reduce fractures and do all major work. You do not need assistants and so on. One thing in regional anesthesia you must remember: You do not always get sensory loss, and not always motor loss.

Dr. W. A. Selman, *Atlanta*.—This subject is very near to my heart. I have not had as much experience in regional anesthesia as I have in local, but it has been said, "as the twig is bent, the tree is inclined." We have all a bend toward ether anesthesia, and we had to incline ourselves rather forcibly against that because we found there were so many things amenable to local and regional anesthesia, and our patients were in such a better condition following operations from the use of local and regional anesthesia that we had to get away from general narcosis. Especially is this true in cases of bad surgical risks. Already they are toxic from some existing pathology, just as general narcosis, especially the lipid solvent of ether or chloroform, might be the determining factor against the patient. Sometimes you may try regional anesthesia and not get as perfect results as you expected, but that need not deter you. You have given it to patients with the object of trying to help them, and if you do not get a perfect result, what is there to keep you from doing infiltration work where regional anesthesia is not perfect. You can infiltrate the tissues with the local anesthetic and go on. Often in abdominal work, where regional anesthesia is employed, it does not prevent pain. If need be, you can assist the regional anesthesia with gas oxygen in many abdominal operations. In fact, in most abdominal operations, if you are careful to use regional anesthesia with

general narcosis with gas oxygen, you can invade the abdominal region with as much impunity by using regional or local anesthesia along with the gas oxygen as you can under the deepest ether narcosis.

Just one or two points I have noticed. The question is often asked if we do not get more infections with local or regional anesthesia by the infiltration method. I find a very simple point in the preparation of the solutions will answer that question. If the solutions are made with normal saline instead of sterile water, the tissues bear that just as well as they do normal saline, because novocain is absolutely non-irritating to the tissues and does not render them more liable to infection.

Dr. Page, Augusta, (closing).—There is one point I should like to stress in my closing remarks. I did not go into the technic of anesthesia on account of lack of time, but while we think of procain and novocain as being entirely harmless, this is not true. You can get too big a dose of novocain or procain as well as too big a dose of cocain.

As to postoperative nausea and vomiting referred to by Dr. Campbell, I do not know that it is due to too large a dose of the anesthetic. However, he should look into that element, because we have never had any postoperative nausea or vomiting where the drug was given in the proper dosage.

I would also decry what most people seem to feel about regional anesthesia, namely, that it is applicable only to special operations. Practitioners will get up and say, "That is all right for patients who cannot take a general anesthetic." This is not true.

I think with the increase in the ability and care with which regional anesthesia is given, it will be applicable to almost any case in surgery, and it is now, with the exception of the abdominal cavity, where there are many adhesions and pulling and dragging are necessary. I do not even except the lower extremity, as with care it can be perfectly anesthetized.

THE SEMI-INSANE*

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The insane have been with us since the earliest dawn of history, but it is only within the past decade that any appreciable progress has been made towards the restoration of them to their homes and families. Now they are accorded more humane treatment than ever before, are given more consideration in our courts, and society generally recognizes the fact that the insane have certain rights and privileges in our social fabric which should not be denied them.

This cannot be said of the semi-insane, despite the fact that they are perhaps more numerous than the insane. Society usually misjudges them, and instead of recognizing their mental abnormality and making allowances as they do with the insane, either condemns them as fakirs, fools or crooks, and refuses to recognize any responsibility as to their care and treatment, or else goes to the other extreme and regards all eccentric people as totally insane and advocates their being placed in asylums. One extreme is as bad as the other, and it is necessary that we arrive at a more conservative attitude before we can hope to ameliorate the unhappy state of this unfortunate class of patients.

Among the earliest psychiatrists to recognize semi-insanity was Pinel, who spoke of them as being able to make "replies which are perfectly correct and exact, and read and write as if their comprehension were perfectly normal." It was not until 1861, however, before any work of consequence appeared on the subject, when Trelat presented his memorable volume on reasoning mania. In this he stated that "this work is entirely devoted to the examination and study of the semi-insane . . . their powers of attention are sufficient to allow nothing of what passes around them to escape them; to let nothing they hear go unanswered, often to succeed perfectly in the accomplishment of a project. They are lucid even in their delusional ideas. Their madness is lucid . . . The object of this work includes the pointing out and recognizing as diseased more than one mind which has hitherto been regarded as sane."

Subsequent to this work of Trelat's, numerous other works have appeared on the subject of semi-insanity, particularly from the pens of members of the French school of psychiatry. The German school of psychiatry, which has had very little to say regarding semi-insanity on the whole, but has separated them into smaller groups such as paranoid personalities, psychopathic personalities, constitutional neuropathic or psychopathic inferiorities, psycho-neuroses, psychasthenias, neurasthenias, pathological liars, etc.

Among the more recent works appearing on the subject of semi-insanity is that of Grasset, in which he furnishes abundant clinical proof

of their existence. Of them Grasset has to say, "the semi-insane may have, and sometimes do have, an important social role to fill; in him the whole psychism is not atrophied, degenerated or diseased. There are inequalities in the development of his psychic senses. Certain of them are weakened, and certain others may be more active, and even more brilliant, and render more service to society than other more weighty and better balanced brains which are considered normal."

In his chapter on the Social Value of the Semi-Insane, Grasset cites numerous examples of men whom we have now placed among the immortals as showing pronounced symptoms of semi-insanity. A few of the more notable examples and their most obvious symptoms may be mentioned. Among whom was Socrates, "who went into ecstasies which were almost cataleptic fits. These ecstasies later took on the character of hallucinations, and at table or in the streets of Athens he would stop short without apparent motive. At other times on the occasion of a sneeze, either by himself or one of his neighbors, he would act or would not act, according to whether the sneeze had taken place on his right or left. But he would always stop as if he heard the voice of God. He ended finally by persuading himself that by reason of his divine existence he was able to exercise at a distance a favorable influence on the young people who followed him, and to lead them, by this sort of moral magnetism, to that reformatory end which he was striving to bring about. He thus lived during his whole life, without doubt playing the part of the martyr, but none the less the exponent of reason, philosophy and virtue, in spite of his hallucinations."

Tolstoy "was seized with a desire to fly when he was eight years of age. The idea haunted him to such an extent that he decided to put it into practice, and jumped out of his study window while making flying movements. He sustained a fall of sixteen feet, and was ill for some time following. Later he decided that a man accustomed to bear pain could not be unhappy; therefore, in order to accustom himself to pain, he would hold a large dictionary on his outstretched arm for five minutes, or else go to the barn and whip himself with a rope until tears came into his eyes. He has written

of his numerous ineffectual attempts at suicide during the years when he was producing his greatest novels. Guy de Maupassant was a psychoneurotic, and would frequently see himself seated upon his sofa when he entered his room. Napoleon believed in presentments and horoscopes, and sought and accepted the prophecies of any sorcerer who promised him good fortune; he was in terror of Friday, of the number thirteen, and considered the letter M fatal. He also suffered from a habitual twitching of the right shoulder and lips. Edgar Allen Poe was a dipsomaniac and was hallucinated at the time he wrote *The Raven*. Newton would deliver fantastic and incoherent lectures, and later died insane. Beethoven was a very eccentric character, and a sort of genial disorder reigned his mind. He would always use several pitchers of ice water to wash his face without noticing that it made a pool on the floor. He also had a habit of disappearing for several days at a time and going out in the woods and stay. On these occasions he would never wear a hat, no matter what the condition of the weather."

Numerous other cases of genius could be cited wherein conclusive symptoms of semi-insanity are present. Moreover, there is hardly a physician who does not have among his clientele some person of undoubted social value to his community who shows signs of semi-insanity. It may only be an obsession relative to his health, or it may be of a more pronounced nature. Lombroso has stated that "we can, without fear, state that genius is a true degenerative psychoses, belonging to the group of moral insanities which may temporarily spring from other psychoses and take their form, but always conserving certain special characteristics which distinguish it from the others."

All people who walk in the dark shadows which lie on the borderland between sanity and insanity are not geniuses, however, and many are a menace to society and frequently commit misdemeanors or real crimes or may be a source of annoyance to their neighbors merely by the exercise of their rights as free men.

Among this class of people two very good examples have recently come under my observation. The first is a man of undoubted mental attainments, good address and a pleasing

personality, whose conversation and observance of the nicer social customs ingratiates himself with a stranger. Yet he has spent the major portion of his life in prison for offenses ranging from forgery to bigamy. Only recently he was discharged from prison after serving a sentence of three years, and judging from past performances he will either be a fugitive from justice or a prison inmate within the next sixty days. The other is the only son of an excellent family. His manner is faultless, but he has been a thief since the age of seven years. In neither of these cases can the psychiatrist do other than regard them as being semi-insane and advise custodial care and intelligent medical supervision rather than confinement in a penal institution. Because they talk intelligently and state they know the difference between right and wrong our courts hold them as being responsible and will continue to send them to prison for various offenses until death overcomes them.

The drunkard, the nymphomaniac, the moral delinquent and the sexual pervert should all be regarded as semi-insane and therefore only partially responsible. If we do this we will not demand that the old Mosaic law of an eye for an eye be carried out, but will be more charitable in our treatment of them and perhaps will be better Christians for having done so.

THE PRESENT STATUS OF THE CANCER PROBLEM

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Time will not permit me to indulge in a general discussion of the many angles of this important subject.

We are told by statisticians that the death rate from cancer is increasing, that there were in the United States 20,000 more deaths from cancer in 1922 than in 1900. Is this increase real or only apparent? We have no definite

answer for there is much evidence available to substantiate both sides.

To-day medical men are better equipped for making a correct diagnosis than ever before, which however might be applied either way. At the present time there are many more well equipped hospitals and pathological institutes, where post mortem examinations are made and many unsuspected cancers are found, thus swelling the recorded number of deaths.

Cancer is predominantly a disease of middle life and old age. At the present time medical science has given us so many means of prolonging human life that a greater number of people attain the cancer age than ever before, thus adding many more individuals to the susceptible list. Again the World War caused the death of thousands of young people, so that now the ratio between those within the cancer age and the younger generation has been greatly increased.

Nothing definite has been added to our knowledge of the etiology of cancer. We know that it develops at the site of long continued irritation—if the irritation is removed a pre-cancer lesion will often disappear spontaneously.

We know that certain organs and parts of the body are more susceptible than others, and that this susceptibility is greater at certain ages and periods of life, but the actual agent that causes the malignant cell changes has not yet been discovered.

We have learned from observation that cancer in certain organs and parts of the body is much more serious than in others.

A cancer in the skin of the neck or face is comparatively harmless, because it is of the basal cell type and does not grow rapidly or form metastasis early, therefore any remedy that will destroy the lesion completely will effect a cure. On the other hand cancer of the lip and mouth is of the squamous cell type, forms metastasis early and is very difficult to cure.

Cancers of the adenomatous type vary greatly in their malignancy, depending largely on the lymph supply of the organ affected, the rapidity of the growth, the amount of connective tissue present, and many other conditions.

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There is said to be a time when every cancer is not a cancer. In other words there is always a pre-cancer stage to every malignant lesion, if we could only recognize it. It is possible to recognize pre-cancer in some parts of the body, for instance, 87% of leukoplakias on the tongue become malignant. A large number of uterine cervical cancers develop at the site of tears, abrasions and ulcers. If these conditions are watched and given proper attention, cancer can be avoided.

It is most important for us to remember that an early cancer is not a painful lesion. If it were nine people out of every ten who now die of cancer would get well for early cancer can be cured. Early cancer yields to many remedies—late cancer yields to none! Early diagnosis then is our only hope. In order to arrive at an early diagnosis there must be co-operation between the people who have cancer and those who are to treat cancer. Education is the only means of securing this co-operation.

Recognizing this fact the American Society for the Control of Cancer has extended its efforts to educate the people until nearly every state and province in the United States and Canada is well aroused and the educational work is progressing systematically and thoroughly. The Society hopes to keep the work in the hands of the medical men and medical organizations. The people must be reached or the deaths from cancer will continue to increase. Time will not permit me to discuss the plans of organization now under way in our own state, except to say that the National Society has and will do everything within its means to advance the educational work in Georgia through our state, county and local committees.

All cancers will not yield to the same treatment. A remedy that will completely eradicate a basal cell epithelioma will only stimulate a squamous cell lesion or an adenoma arising from some glandular structure.

At the present time there are three methods of treatment open to us: (1) Surgery, either excision or cautery, or a combination of the two, (2) Radium or X-ray or a combination of both, and (3) the combined use of both surgery and radiation. For instance I am now treating a patient with a squamous cell carcinoma of the mouth. I have cauterized the

local lesion and Dr. Clark is giving heavy dose of X-ray radiation to the lymph drainage area of the neck.

Owing to the chaotic feeling that seems to exist among men of large experience, I wrote Mr. Osborn, Executive Secretary of the American Society for the Control of Cancer, and asked him a series of questions.

The substance of his reply is about as follows:

(1) "After having read, heard and lived with the subject for the past three and a half years, I have come to the conclusion that all that is claimed for radiation may eventually be attained but at the present time the results supported by five year cure statistics, do not justify the claims made by enthusiasts of X-ray and radium."

(2) "If I had a cancer of my lip or mouth, I would have it removed by the best surgeon I could find, and if he thought best a complete dissection of the lymphatic drainage area, and radiation, preferably by X-ray applied later."

(3) "If a member of my family had cancer of the mammary gland, I would have it treated surgically, with intensive post operative X-ray radiation."

(4) "Statistical evidence regarding cancer of the uterine cervix is so at variance that it is difficult to determine what method to advise, but it seems that in the hands of a skillful radiologist—radium would be the method of choice."

From a careful study and close personal observation for several years, I have come to the following conclusions:

(1) Radium is the best method of treatment for small basal cell epitheliomas of the face and neck. It offers a large percentage of permanent cures.

(2) Complete removal by excision or cautery of all lesions about the lips, tongue or mouth, with a block dissection of the neck followed by X-ray radiation is the only safe method. Radium may cure temporarily the local lesion, but a large per cent are followed by metastases in the sub-maxillary nodes, which are almost always incurable.

(3) Cancer of the breast can be cured only when an early diagnosis is made and treatment

instituted at once. A thorough and carefully performed radical operation, followed by intensive X-ray radiation offers the best method of treatment.

(4) Cancer of the digestive tract is as a rule discovered so late that treatment is of little avail. Surgery offers the only hope. Doctors' Bldg.

THE RELATION OF TONSILS AND ADENOIDS TO THE GROWTH AND DEVELOPMENT OF CHILDREN*

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This is an old question, but always an interesting one, because it contains so much human interest. In speaking of the tonsils I refer to both the palatine and pharyngeal tonsils unless otherwise specified. The tonsils are lymphatic organs and have many counterparts in the body; the spleen, the thymus gland, hemolymph nodes, lymph nodes, Peyer's patches in the intestines. Histologically, lymphatic tissue consists of reticular connective tissue and lymphoid cells, the latter filling the meshes of the reticulum. At various points on the surface of the tonsils, and especially in the crypts, occurs what is known as lymphoid infiltration of the epithelium. This consists of an invasion of the epithelium by the underlying lymphoid cells. It varies from the presence of only a few lymphoid cells scattered among the epithelial to an almost complete replacement of epithelium by lymphoid tissue. In this way the latter reaches the surface and lymphoid cells are discharged upon the surface of the tonsils and into the crypts; hence, there is always contact between the surface of the tonsils and the inner part. Anatomically, the crypts, the indentations and the location make an ideal nidus for harboring infection.

Lymphatic tissue, wherever placed in the body, seems susceptible to infection. How frequently we observe involvement of the spleen, infection of Peyer's patches, and the various forms of adenitis.

The relation of tonsils and adenoids to growth and development is often very great; first, for the mechanical effect that may be pro-

duced by pharyngeal tonsils, and second, for the systemic effect that may be produced by the palatine tonsils. Pharyngeal tonsils or adenoids may interfere with the infant's nursing, may cause mouth breathing with consequent flat chest and distortion of the facial expression, they may help to cause malocclusion, which may change the whole bony structure of the face. They may interfere with hearing and decrease the receptivity of the child and seriously interfere with his school work. They cause a predisposition to colds, which may be followed by laryngitis, bronchitis, asthma and otitis media.

Pathological palatine tonsils produce a wide range in metabolism, only as a focus of infection and not because of an internal secretion. Infection of the tonsils may be saprophytic bacteria, which live upon the organic matter collected in the crypts. The result is putrefaction with offensive breath, but no systemic effect is evident. Infection may take place by a group of bacteria, called by Kendall "opportunists," with respect to pathogenicity, and they are usually secondary invaders because they require some break in the continuity of the skin or mucous membrane to permit of their entrance to underlying tissue, such organisms are the streptococcus and staphylococcus. This is the type of infection that has brought so much odium upon the tonsil, for the results are systemic and serious, such as arthropathy, cardiopathy, nephropathy, adenopathy, chorea, malnutrition. Finally, infection may be by a small but formidable group of bacteria, which are progressively pathogenic, as the diphtheria bacillus. If the children of this State are like the children of other States, and there are many reasons to believe they are, for we are as ignorant and apathetic as other folks, and 80 per cent of the rural section of the State is without any health regulations or education, there are at least 276,954 children suffering from malnutrition, due to improper nutrition and physical defects. There are 100,000 children in Georgia that are repeaters in school every year, due in the majority of instances to physical defects, which decrease their receptivity. There are at least 25,225 children in Georgia with defective hearing, due mostly to the mechanical effect of adenoids. There

are many cripple children in Georgia, due to infected joints; there are many cases of endocarditis, pyelitis, pylo-nephritis, adenitis, chorea, rheumatism, which result from a focus of infection in the body. There are at least 215,215 children in Georgia with enlarged tonsils and adenoids, which play a large part as being the focus of infection in all of the above conditions. Of the physical defects which handicap children I am inclined to believe the tonsils are the greatest. It probably ranks next to nutrition in its effect upon mental and physical development.

I am not radical, and do not believe that all tonsils should be removed, and sometimes wonder if they are not occasionally removed without the proper correlation between tonsil and patient. If the correlation is properly done by weighing all the evidence, *e.g.*, signs of mechanical interference and signs of infection, and the influence this is having upon the body, there will be no mistake as to what should be done.

Phillips Brooks said: "He who helps a child, helps humanity, with a distinctiveness, with an immediateness, which no other help given to human creatures at any other stage of human life can possibly give."

USE OF SUTURES IN TONSILLECTOMIES*

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Since the days of Hippocrates, tonsillectomies have been done, and were at that time considered a dangerous and bloody operation. It is very obvious that with the crude instruments and poor illumination such would be the case.

To use sutures to advantage one must first familiarize himself with the source of blood supply of the tonsil. We have the tonsillar artery, a branch of the facial, which is the chief vessel to the tonsil. Though at times this is absent and is replaced by a branch of the ascending palatine, another branch of the facial.

The *Tonsillar Artery* passes upward on the outer side of the superior constrictor muscle, through which it passes off branches to the tonsil and soft palate. The ascending pharyngeal and dorsalis lingual also give off branches

to the tonsil. The descending palatine artery (a branch of the internal maxillary) and the small meningeal artery sends small branches to the tonsil.

The *Venous* supply corresponds, but the veins lie just beneath the capsule of the tonsil. At times two large blue veins will be seen coursing the entire length of the tonsillar fossa. These veins anastomose, forming the tonsillar plexus. At times these veins are very large.

Clinically I have observed that the most frequent site of arterial hemorrhage is at the superior and inferior pole and in the middle of the tonsil fossa.

The suture of choice today is the No. 0 plain catgut, which has been thoroughly soaked in sterile water so as to give the catgut flexibility in order to tie the sutures tighter. All types of catgut have been used. The larger sizes are not necessary and the smaller break too readily. Silk sutures were used for a short time, as well as linen. The chief objection to these was that the patient would complain of seeing the sutures in the throat. Then at times they would have to be removed by the use of the scissors.

It has been found that by the use of sutures hemorrhage following tonsillectomies has been reduced to a minimum. If care is taken in ligating each vessel there is no more necessity for bleeding here than in any other part of the body. Surgery of the throat is just as important as surgery of any other part.

The method used for putting the suture around a vessel is by using a special needle the curved part being at right angle with the shaft. Thread the needle from without, pulling the suture through the eye only about three inches. The needle is inserted under the artery or vein and as little tissue as possible is caught. Then with a pair of Alice tissue forceps the suture is pulled through and the needle withdrawn. Three knots are tied, so that the suture will not loosen readily.

The vessel is not caught with a haemostat, because there are times when the suture does not get the vessel and the haemostat stops the bleeding. Later the end will open and the vessel bleed. Veins are tied above and below in the same manner.

The objection to the slip-knot tie, by catching the vessel with a haemostat and tying a

slip-knot around the haemostat, cutting one end and then sliding the knot down over the end of the vessel, is that the knot comes off when the patient begins to react and vomit. The former method can be developed by the operator to such rapidity that one finds it much faster and more satisfactory as the suture will never slip off the vessel. Almost every vessel is tied off in this manner, and especially all the arteries. Care must be exercised, however, not to gather in one of the sutures nor anything but the vessel and a very small amount of connective tissue on account of several complications for which this method of controlling hemorrhage has been too severely criticized.

Some men have prejudiced themselves against the use of sutures altogether but today most men, at one time or another, are using them. Sutures in children are not so often required, but in adults, and especially in cases with high blood pressure (160 or above), they are necessary.

Pain following tonsillectomies after sutures have been used is no greater than without their use, as only the ends of the vessels are caught and the No. 0 plain catgut only holds from four to five days until it is absorbed, thus eliminating the removal of sutures. However, I have seen operators using No. 2 catgut to tie off a poor little artery in a tonsillar fossa, so one would naturally expect pain following the use of a suture of that size. Scar tissue formation and contraction after sutures have been used are no greater than without them.

Whenever sutures are employed one must also know something of the anatomy surrounding the tonsillar fossa in regard to the relation which certain nerves bear to the fossa, as permanent injury may be done by the tying off of a nerve.

Sutures placed in the lower angle too deep and too near the tongue are liable to catch one of the nerves which courses along the lower pole, just beneath the lymphoid tissue at the junction of the anterior pillar and tongue. If a suture is tied around one of these three nerves it will cut it. These nerves are: No. 1—A branch given off from the sensory division of the facial that supplies the anterior two-thirds of the tongue which, if cut by a suture, will

regenerate. No. 2—The posterior one-third and taste buds are supplied by branches from the glossopharyngeal or ninth cranial nerve, and if tied off will not regenerate. No. 3—The nerve supplying the muscles of the tongue is the lingual, a branch from the hypoglossal, and should this nerve be tied a paralysis of one side of the tongue will remain.

Extreme care must be exercised in suturing vessels at the lower pole in order that no more tissue will be picked up than is necessary and especially not going too deep, as this is the means by which the nerves are caught in the tissues.

In my experience I have seen only one case with a paralysis of one side of the tongue caused by tying off the nerve, and in this case the sutures were taken very deep. The patient had perfect control over the tongue and one could only tell there was a paralysis by examination. This signifies injury to the lingual nerve on one side and this being a motor nerve we have a permanent paralysis.

In three cases patients complained of not being able to feel anything for four or five days. This signified injury to the sensory division of the facial nerve, but the sensation returned in a few days. However, when patients complain of a sweetish taste in the mouth after operation, which continues after the tonsillar fossa is completely healed, one would recognize an injury to the branch from the glossopharyngeal (which is the nerve of taste) and if cut will not regenerate.

None of the vessels are tied before the tonsils are removed and after they are removed a sponge is placed in the fossa for a short time so as to stop the oozing from the smaller vessels. When this is done one will notice that most of the bleeding is coming from the superior and inferior pole. Only taking two sutures will stop all the larger vessels.

One of the great arguments against sutures is that some men have the impression that the pillars of the tonsil are sutured together. This is not true. Only the vessel end is tied. The contra-indications for the use of sutures are only the dangers I have enumerated, and experience in their use teaches one there is no danger. The indication for a suture is a bleed-

ing vessel whether it be an artery or a vein.

When the surgeon goes to the room of the patient feeling there will be no hemorrhage following the operation and he tells the waiting relatives *why* the patient will not bleed, *he* feels better and the anxiety of the friends is much alleviated.

When a child returns to the room where the mother is waiting she expects that child to return as it left, and not with blood running from the mouth and later vomiting a large quantity of it. After a suture has been used we know the end of the vessel can not open up and bleed—as it does sometimes when the vessel has been clamped with a haemostat.

Today primary hemorrhage following tonsillectomies is far less frequent than only a few years ago, due to the fact that greater care is now taken at the time of the operation. In former days the man who could do the quickest tonsil operation was considered the best man. Whether he removed only one-half of the tonsil or whether he left spurting arteries made no difference. But today the tendency is toward stopping the bleeding, whether it be one way or the other, and the *sure* method is by the use of sutures. There is no difference between surgery of the throat and that of any other part of the body and an artery or vein will bleed more readily here than in any other place, and the surgeon should be criticized if a hemorrhage follows a tonsillectomy, just as the general surgeon is when he must open a hernial incision to stop the bleeding.

Before closing, there are a few important things I wish to mention. First, the catgut *must be soft* so as to tie down easily and closely, otherwise it will tear a large hole through the tissues and will not slip to tie closely and usually results in tearing the vessel in some other place. Second, the sutures should be cut about fifteen inches long for one tie and to allow both ends to hang out of the mouth for a secure grasp with the fingers. Third, the mistake made by most men in pulling the sutures out of the needle is that he will pull the needle up in order to get the suture out easily, which results in tearing the tissues.

In the course of over four thousand tonsillectomies with the systolic blood pressure rang-

ing from eighty to over two hundred millimeters of mercury and the age ranging from two years to sixty-five, I have seen only about six cases where there was any bleeding, and this occurred in cases where the end of the vessel was caught with a haemostat to tie the vessel. However, not as many arteries are tied in patients with a low blood pressure as in those of high blood pressure.

A large number of patients in the declining years of life who need to have their tonsils removed fear the operation because of bleeding. They realize their vessels are hard and will not stop bleeding as quickly as the robust young foot-ball player, and they will not heal as readily.

In tonsillectomies done under local anaesthesia sutures are necessary if one finds a spurting artery, but the infiltration of the peritonsillar tissue usually compresses the arteries and stops a large amount of the bleeding. Sutures used in these cases are tied by means of the slip knot with one end cut and slipped down over the haemostat that holds the end of the vessel and pulled tight, then the long end cut. These sutures are better manipulated dry, as a knot of this kind will not slip into place when wet.

The No. 0 plain catgut will work best, and one will note that vessels tied this way will hold for a short while and then slip off, but since there is no nausea from the anaesthesia they may remain on longer than in general anaesthesia.

The practice of sending patients back to the room with bleeding vessels in the throat, to my mind, is very poor surgery, and in future years we will see it less frequently.

THE VENEREAL PROSTATE

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A white male, age forty, was referred to me December 8th, 1922, with the following history: Acute gonorrhoeal urethritis 19 years ago. No acute condition since, but during this entire time has noticed at intervals of several

months a slight discharge from penis, lasting a few days to a week, with a constant heavy feeling in the perineum. Alcoholic excess invariably brings on the discharge, with frequency of urination, and pain in the perineum. Examination revealed the following:

Muco-purulent discharge from penis.

1st. Glass of urine loaded with heavy shreds and pus.

2nd. Glass of urine loaded with a brand like sediment, no shreds. Prostate enlarged and boggy with a few hard nodules in left lobe. (Cowper's glands not palpable.) Smear of urethral discharge showed pus and epithelial debris with various kinds of cocci and bacilli but no gonococci. Smear of sediment of 2nd glass showed epithelial cells loaded with bacilli and cocci. Smear of prostatic secretion showed large number pus cells. Urethra admits a Number 30 French sound to bladder. Endoscopic showed an enlarged verumontanum, dark red; region of bulb showed some granular infiltration, while the anterior urethra showed many open glands of Littre, dark red in color. No stricture. Diagnosis: Chronic posterior urethritis, chronic prostatitis, chronic folliculitis, and chronic cystitis.

Here is a man who had gonorrhoea at the age of 22, several years prior to his marriage, and yet at the age of 40 he still suffers from the complications of the original attack, and to his great sorrow has never been blessed with children. A childless marriage with 18 years of recurring urethritis.

This is a typical history of chronic gonorrhoea, not a rare instance that is encountered once in a life time. A series of such cases has prompted me to write this paper on the chronic rather than the acute manifestations of gonorrhoea. It will be impossible to take up all the chronic complications in this paper, therefore, I will limit myself to the condition which, in my opinion, is the most frequent, as well as the most troublesome in gonorrhoeal complications, i. e. the venereal prostate.

It might be well to mention "en passant" some of the more remote possibilities of the gonorrhoeal process, such as arthritis, myositis, tenosynovitis, iritis, periostitis, heart and blood vessel changes (1) (9), as well as the more usual local stricture formation, vesiculitis, cowperitis, folliculitis, and epididymitis.

It is not my purpose to bring forward some new drug that is a specific, but rather to stress the absence of any such drug, and to impress the necessity of prolonged accurate treatment, which, even though it may grow monotonous to both the physician and the patient, is necessary for the final cure and happiness of the unfortunate victim. These patients cannot be dismissed from the office with a prescription for a urinary antiseptic if good results are to be obtained. It is this chronic type of venereal case of a few months or years standing, so often pronounced cured by the physician, which, during the first few weeks of married life, is lighted up, by the increased sexual activity, into an acute urethritis with all its attendant complications, mental agony, and embarrassment, not to mention the resulting childlessness.

To understand the proper treatment it is necessary to briefly review the anatomy and physiology of the urethra and prostate. The prostate gland, surrounding the first portion of the urethra, is composed of glandular and muscular tissue, the former portion being, "composed of minute slightly branched tubules, the walls of which show numerous saccular dilatations." (2) These tubules lead into the prostatic ducts, 20 to 30 in number which empty into the urethra as it traverses the gland. The nerve supply from the hypogastric and pubic plexus is very rich, probably accounting for the severe grades of neurasthenia frequently seen in prostatic disease. The organ is surrounded by a venous plexus which drains into the hypogastric veins, this rich venous supply pre-disposing to venous congestion, the forerunner of prostatitis. In addition to the true prostatic glands there are the minute subcervical glands of Albarran, which penetrate into the sub-mucosa from the urethra. Physiologically the prostate is an organ of secretion, contributing a thin, opalescent, albuminous fluid, to the semen, this fluid being essential in maintaining the motility of the spermatozoa. In addition to its secretory function the gland, by its musculature, assists in expelling the last drops of urine from the urethra, as well as its own secretion during ejaculation.

The inflammatory diseases are divided into the acute and chronic, as well as the follicular and

paranghymatous, the latter distinctions, however, are of no practical importance to us in this discussion. The predisposing cause of prostatitis is congestion, and the exciting cause, infection. Of the more usual causes of congestion may be mentioned, irritating urine, constipation, hemorrhoids, ungratified sexual excitement, excessive coitus, and coitus interruptus. The most frequent cause of infection is posterior urethritis, while the passage of unclean instruments is second in frequency. Infection beginning in the prostatic urethra travels through the ducts, along the tubules into the gland ducts. Chronic prostatitis is usually the sequel of the acute, though very often the acute prostatitis is overlooked and the patient never knows he has an infection of the prostate until months later when a recurring gleet starts him on the rounds of the physicians of the community.

The symptoms are not exact, in fact it is impossible to definitely differentiate the chronic prostate from other chronic urethral conditions by the sympatology alone. Among the more usual symptoms, which we may well divide into two classes: those of a genital and those of a urinary character; may be mentioned, 1st. Those of a genital character:

- a. Premature ejaculation.
- b. Prostatorrhoea, especially noticed after defecation.

- c. Imperfect erections.
- d. Painful nocturnal emissions.
- e. Pain during intercourse.

2nd. Those of a urinary character:

- a. Frequency of urination.
- b. Heavy weight in perineum.
- c. Pain just back of meatus.

Pain may be referred to the hips, thighs, testicles or rectum, neuresthenia is a common symptom; These same symptoms may however come from other conditions as illustrated by the following cases:

White, male, age 62, complaining of severe pain one inch from meatus, relieved by urination. Examination of the genito-urinary system negative except for an inflamed verumontanum. A drop of cocaine applied through an endoscope to the verumontanum caused immediate relief of the pain.

The most important point in the diagnosis is

microscopical examination of the prostatic secretion as obtained by massage. It is essential to wash the urethra out well with sterile water, or borac acid solution leaving several ounces in the bladder before massage, then, if the material is not obtained by massage, as is frequently the case, the patient is allowed to void and the solution used for the irrigation centrifuged and the sediment obtained placed on a slide. Methylene blue gives an entirely satisfactory stain. These slides should be stained and examined at once as delay makes them unsatisfactory. The secretion normally contains one or two leucocytes, but three or more to the high power field, should be considered pathological, particularly if the urethra has been well washed out before massage. Palpation of the gland is second in diagnostic importance to the above. By this means is determined the size, contour, and consistency. It may or may not be enlarged. There is so much difference in the normal size of the prostate that it is impossible to tell whether or not there is moderate enlargement, for what would be enlargement in one man, might be a normal prostate in another. In consistency the gland may be very hard or much softer than normal, giving the boggy sensation so often found. When the gland is diseased, one can nearly always find in the left lobe from 1 to 3 or more hard, nodular areas, glaring symbols of prostatitis. These nodular areas are nearly always found in the left lobe, though occasionally in the right. Undoubtedly the left lobe is involved more often than the right, 80% as given by Suddarth (VI) who explains it as being caused possibly by the fact that the veins of the left side are crossed by the arteries of the right side, this anatomical condition favoring congestion in the left lobe. The cause of the predominance of varicocele in the left side has no relation to the predominance of left lobe prostatitis.

We easily see by a review of the anatomy and pathology the absurdity of relying upon urinary antiseptics, or urethral irrigations alone, to reach the diseased focus in prostatitis. The pathological condition is in the glands contiguous to the urethra, or deep in the prostate itself, where internal medication or urethral irrigations are powerless, on account of their inability to reach the infection. Internal medication alone, is as plausible in chronic prostatitis,

as a throat gargle is efficacious, as a cure in pulmonary tuberculosis. Our foremost treatment today is prostatic massage. This is done not merely to express the pus contained in the tubules, but to bring about also, by a mild reaction excited in the tissues, an increased arterial flow and faster venous return. If massage fails in this particular, it is incorrectly done. The patient is placed either in the knee chest position or else with knees straight and body bent across a table, then the index finger of either hand is gloved and lubricated, and slowly made to enter the rectum, then by wide sweeping gently motions from side to side, every portion of the gland is massaged, the force of the massage being slightly increased as the treatment continues. From five to ten minutes is necessary for the best results. If pain is encountered massage should be discontinued for a week and then begun again more gently than before. From once to three times weekly is the average interval between treatments. Massage should always be preceded and followed by some mild urethral irrigation, leaving several ounces in the bladder before massage to be voided immediately afterwards. I use silver nitrate in increasing strengths, beginning at 1:16000 and increasing gradually to 1:1300 using the stronger solution of 1%, 2% and 3% to be given by instillation and urethoscopic application. Drugs used are as you know legion, but I personally favor silver nitrate, though just as good results may be obtained by any number of others. The solution should always be hot, from 100 to 118 degrees.

Dilation of the posterior urethra once weekly with a Kollman dilator is second only to massage. By this means we aid in clearing up the always present posterior urethritis, besides clearing out the prostatic ducts of pus and debris and expressing the contents of the urethral glands. The principles of health should be insisted upon, constipation relieved, urine made bland and slightly antiseptic, moderate exercise and moderate diet, with avoidance of two things:

1. Excessive alcohol.
2. Ungratified sexual excitement.

I have found that married men are cured more quickly than single men, and I believe that normal regular intercourse is the explanation, with the additional factor that they are more likely

to attend strickly to treatment, than are the single men.

Before beginning the treatment of this condition, it is of course essential to examine all other parts of the genito-urinary tract and repair any pathological condition found and especially is it necessary to give adequate treatment to any strictures present. Let me caution you to be sure, in sounding for stricture that the sound enters the bladder. I recently had a young man come to me for examination for promotion in the army, who a few weeks previously had been examined by his family physician, and told that he had no stricture as a sound passed in all right. I found an impassable stricture at the membranous urethra. The physician had evidently passed the sound only to the stricture, thinking it had entered the bladder. I might well digress for a moment to remind you that strictures come on months and years after an acute urethritis, some authorities believe that ten years is an average time for stricture formation, through most give from 3 to 5 years. It is often said that a too rapid cure is a cause of stricture, this I believe absurd for the quicker a case is cured, the less likelihood of stricture or any other complication.

If the meatus will not admit at least a number 26 French sound do a meatotomy up to 28 or 32 depending upon the size of the urethra. Proper examination of the urethra is impossible with a small meatus and the treatment of stricture, or indeed the diagnosis of stricture, is impossible, as well as the proper treatment of prostatitis. The use of heating sounds is theoretically ideal, but I am at this time unable to say whether the practical results are as good as the theory would suggest. Hot enema and hot sitz baths, up to 118F, are a great help but it is nearly impossible to get the chronic cases to take them, though the acute cases willingly do so, owing to the great relief from pain that they give.

The use of vaccines is of marked benefit in some cases, though in the majority of cases no benefit occurs. Those patients in whom a reaction is excited seem to benefit, while in those in whom no reaction occurs no benefit is evident. I mean by reaction, a temperature of about 100 or 101 degrees F. It is of doubt whether the autogenous vaccines are of more value than the stock

vaccines. I use a stock vaccine containing gonococci, streptococci, staphylococci aureus and albus, and colon bacilli. The acute conditions give better results with vaccines than do the chronic. I am looking forward with great interest and hope to the electrical application of heat, by means of the D'Arsonval high frequency current, through one electrode in the rectum and the other over the pubis. If we could believe the enthusiastic reports of some of the electropeutic literature we would abandon all other treatment. I am carrying on a series of experiments with this current which I hope to report later.

The following case illustrates the nemresthevis type:

White, male, age 28, complaining of being nervous, sleepy, poor digestion, no energy, pain at end of penis and in back, and weight in rectum and perineum. History of gonorrhoea eight years previously. Examination was negative except for the following: Meatus admits only 22F. sound prostate apparently normal size, left lobe hard and acutely tender, center of left lobe very soft. Smear of secretion showed from three to five pus cells to the field. A meatotomy was done at once. After the first week of treatment pain in penis, rectum, and back, disappeared. After one month the prostatic secretion contained only one pus cell to field. Dismissed after five months with a cure of the prostatic trouble, and a great improvement in the general symptoms which will in time disappear.

Another typical case is the following:

White, male, age 29, complaining of a slight discharge lasting several days, after coitus or alcoholic excess. History of gonorrhoea six years previously. Examination disclosed an enlarged prostate, with several modular areas in left lobe with smear showing three to six pus cells to field. After six months of treatment the patient was dismissed as probably cured, since repeated smears showed only an occasional pus cell and excessive alcohol, coitus, or vaccine, failed to bring on a recurrence of the symptoms or shreds in the urine.

There is nothing in the treatment of chronic prostatitis that is dramatic. The process is slow, but if properly done, sure. Patients should be informed at the beginning of treatment, of the probable length of time necessary, and the

habit of predicting cures in a week or two should be abandoned. My patients are always told exactly what to expect, that the treatment may take from six months to a year, and that patience is the primary, foremost and absolute essential to a cure.

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THE CONTRIBUTION OF ORAL LESIONS TO THE CAUSE OF CANCER

Joseph A. Pettit, Portland, Ore., (Journal A. M. A., Nov. 3, 1923), asserts that few cases of malignancies of the oral cavity appear without a history of some preexisting oral lesion of either an inflammatory or a traumatic type. These facts and observations should give some credence to the theory that malignancies of other parts of the body may have some type of traumatic or bacterial irritation to cause an unphysiologic and unanatomic overgrowth of otherwise normal cells, disrupting the communistic organization existing in the local area to such an extent that a malignant tumor supersedes normal processes.

THE MENTAL DISEASE PROBLEM*

Extra-Mural Psychiatry

George L. Echols, M.D.

Assistant Physician, Georgia State Sanitarium,
Milledgeville, Ga.

Under the term "Extra-Mural Psychiatry" I wish to mention and discuss briefly some of the different means or measures through which mental diseases may be considered, studied and treated "outside" of mental hospitals, private and public.

The first thought is that of preventive measures, necessity for which is most keenly realized by those men doing mental hospital work. I feel that it is the duty of these men to see that proper emphasis is brought to bear on educators, social agencies, clergy, physicians, etc. The studies of George E. Hyde of 15,000 school children indicate that one per cent are nervous, unstable, etc. The parents and teachers need scientific aid with this group. We would naturally conclude that the nervous and unstable children of today, if left alone, will result in many a psychotic adult of tomorrow. If the physicians, surgeons and other specialists had a reasonable working knowledge of mental diseases many an individual, figuratively speaking at the forks of the road—one leading to mental diseases and other to mental health would be directed toward health and away from an insane ward. More than one-half of the inmates of our penal institutions are suffering from some mental disease or defect of some form. The pitiful thought is that the defect or disease was not recognized and no steps taken to prevent the crime. The preventive measures might prove to be more economical than the jails, criminal courts, and penal institutions and beside prevent the individual's blasted hope and his family disgrace or shame.

About 25% of our psychoses are frankly organic and many of the underlying organic conditions such as neuro-syphilis, arterio-sclerosis, focal infections, and many others are preventable, treatable and frequently curable. Many of this group if treated early and persistently

would be benefited or cured and an asylum commitment avoided. Preventive measures might be discussed almost indefinitely, as the thought is really the rock bed foundation of our great society. Mental Hygiene—A society which deserves every possible encouragement.

The second consideration is the Early Recognition of Mental Diseases. The most essential feature of early recognition is the general dissemination of psychiatric knowledge among the medical profession in general so that the condition may be recognized early, and essential treatment started months or years earlier than treatment is started at present. This general dissemination of psychiatric knowledge can be brought about by proper encouragement from mental hospitals, by adding psychiatry to the list of subjects for State Board Examinations, by stressing psychiatric departments in our medical schools and greatest of all, by every doctor regardless of specialty buying and studying text books on Mental Diseases.

The early recognition and early treatment of mental disease can be advanced rapidly through the establishment of Psychiatric Clinics at centrally located points. These clinics could be held at appointed places and at intervals according to the local needs and the psychiatrists' available time.

Under the direction of the State Sanitarium and with the cooperation of the Bibb County Medical Society, one of these Psychiatric Clinics has been in successful operation at Macon for the last three and one-half years. This Clinic is held every Friday afternoon—the average patient visits has been 400 per year, and an average of 90 patients have been treated each year.

With the assistance of the New York Foundation a Psychiatric Clinic is about to be established in Atlanta. By all means this should be associated closely with the Psychiatric Department of Emory Medical School so that sufficient clinical material may be available for teaching purposes.

It appears to the writer that a Psychiatric Clinic should be organized and operated by the Psychiatric Department of the Medical School at Augusta.

I believe that Savannah would be an excellent center for another Psychiatric Clinic. By

*Read before the Medical Association of Ga., May 2-4, 1923, Savannah, Ga.

the approval of the Chatham County Medical Society and the cooperation of its members, we feel sure that the State Sanitarium would send one of its physicians at necessary intervals to examine and advise concerning the treatment of neuro-psychiatric cases. I have been urging the establishment of an outpatient Psychiatric Clinic at the Georgia State Sanitarium.

The strong feature of these Clinics should be the encouragement of suspected cases to come voluntarily, or to be brought by relatives, friends or family physician, their cases studied, necessary examinations made, their troubles talked over, and advised as to rest, treatment, etc. And in every case where there is a reasonable situation, let the patient be referred back to the family physician with advice and encouragement in regard to treatment. Many early psychiatric cases could be treated and cured as extra-mural patients—thus saving the patient's time, and also preventing the stigma of an asylum commitment and beside this we have the saving in hospital maintenance.

A third important feature of Extra-Mural Psychiatry is the necessity of changing the present pessimistic ideas and views of mental disease. The medical profession and the people in general must be led away from the conception that an individual is "Loony or Crazy," and be made to grasp the truth that the patient has a mental disease—a disease as real and as treatable as cancer, tuberculosis or a broken leg; and that the first thought is to prevent the disease, and the next thought is to treat and cure it early.

Many of our registered nurses sign the directory; "No mental cases accepted." This is really pitiful and I am inclined to think that it is due more to their lack of a reasonable working knowledge of psychiatric nursing, and as a remedy would suggest a four or six months affiliation to a training school in a State Hospital—the general hospital giving credit for the affiliation. A scheme of this sort would give our nursing profession a much more optimistic conception of psychiatric nursing.

A fourth consideration in Extra-Mural Psychiatry is the fact that many patients showing mental symptoms present as an etiology

conditions that are medical or surgical, and the patient should be treated first from that point of view. For the present and for years to come our state hospitals will be over crowded, inadequately supplied with maintenance funds, and manned by medical staffs too few in number, and so poorly paid that the most brilliant and aggressive talent coming from our best medical schools will not be attracted to state hospital psychiatric work. Private mental hospitals are somewhat scarce, and like state hospitals are more custodial, and their treatment is not so much individual as it is a form of group treatment. Many of our general hospitals are prepared to make thorough studies of their individual cases, and these general hospitals should be encouraged to study and treat as many mild psychiatric patients as possible; and this is especially advisable in the early organic cases, and in the cases of focal infection. Many of the depressions in middle life present in the very fore ground medical problems, as anaemias, early arterio-sclerosis, or other problems of internal medicine which is of more consequence than the psychosis. Family physicians should learn that there is a class of psychiatric patients that should be studied and treated first in a good general hospital in preference to a mental hospital, since the general hospitals offer better facilities both in surgery and medicine, and through these means many etiological factors may be removed and the psychoses cured.

A fifth consideration is the necessity for a more liberal after care of patients dismissed from mental hospitals. Many of these patients when discharged and returned to their home surroundings as improved or restored do not get along well because they are not understood, and suffer relapse of their mental trouble. To keep many of these patients in good mental condition it is necessary to get them readjusted back into their home surroundings. By providing a proper environment many quiescent and harmless cases could be removed from state hospitals and be made self sustaining and have their freedom, be much more contented, and at the same time give room in the hospital for early acute or violent cases that are in urgent

need of treatment. Within the last twelve months from a certain state hospital an extra-mural worker removed and placed out, within seven months time, enough quiescent patients to reduce the hospital expenses five hundred dollars (\$500.00) per month.

In conclusion I wish to urge that you as physicians buy text books on psychiatry, and study the mental disease problem. Mental diseases are on the increase. To prevent the spread of mental disease and to reduce the number of insane in our state, is a work of the highest and most patriotic service.

Summary:

1. The first great problem of Extra Mural Psychiatry is Mental Hygiene and Preventive Measures.

2. The second great consideration is the Early Recognition of Mental Diseases and treatment started months or years earlier than treatment is started at present.

3. Progress with the Mental Disease problem will be advanced by changing the present pessimistic ideas and views of Insanity.

4. Many a psychosis is a problem of Internal Medicine, or Surgery.

5. It is absolutely necessary that we develop a more liberal consideration and after care of patients dismissed from mental hospitals.

RAILROADS AND PUBLIC HEALTH

Disease travels on legs. It is usually carried by human beings and closely associated animals, so that an outbreak in one section may quickly penetrate the country by means of fast railway trains carrying millions of people. Few realize the responsibilities assumed by the railroads and the active measures they have adopted in cooperation with the United States Public Health Service to meet them. In addition to measures designed to prevent accidents, the railroads also have developed and or-

ganized elaborate plans to prevent the spread of disease. To take but a few illustrations from the story told by Archibald Chace in the December issue of *Hygeia*: "Is it safe, to drink from the tank in a railway coach?" The water supply is examined every few months by the U. S. Public Health Service. The tank is sterilized with steam at intervals. The ice is handled with every precaution to prevent contamination and after July, 1924, must not come in contact with the water. In some localities in which the source of water is not above suspicion, the water is sterilized with liquid chlorine—so scientifically that it cannot be detected. Dining car crews are examined physically at stated intervals. The carpets, woodwork, seats and floors are scrubbed and cleaned and fumigated to destroy germs that are carelessly scattered by thoughtless passengers. Not only do the railroads spend much thought and care in keeping their own property free from the risk of spreading diseases, but they set examples that might well be followed by the passengers in their homes and offices.

ATHLETICS

"Men with flabby muscles and large abdomens are prone to do flabby thinking and, as a consequence, act with corresponding inefficiency in all matters in which they participate. Lessons learned on the athletic field and in the gymnasium, will be carried into the daily work of every man. Men physically fit do not violate the fundamental laws of health and are free from temptations which beset men who make no effort to keep in good physical condition." These comments are made by Mr. E. C. Delaporte, superintendent of the Chicago Public Schools Athletic League, in his account in the December issue of *Hygeia* of the recent athletic field meet of the Chicago police department, which was witnessed by more than a hundred thousand people.

THE JOURNAL

OF THE

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Articles are accepted for publication on condition that they are contributed solely to this journal.

Manuscripts should be typewritten, double-spaced, and the original (not the carbon copy) submitted. Used manuscript is not returned unless requested.

Communications and items of general interest to the profession are invited from all parts of the state. We especially invite county society secretaries to send us information of happenings in the county that would be of interest to the members throughout the state.

Editorial Department

WHY DOCTORS BUY WORTHLESS AND FRAUDULENT SECURITIES

Samuel O. Rice

Educational Director, Investment Bankers' Association of America.

Physicians who number bond men, investment bankers, among their patients frequently complain that bond men squander their health.

"The heads of three bond houses," my family doctor said to me the other day, "are patients of mine, they and several subordinate officers of other houses, and I'll be hanged if they aren't more careless with their health than is all the rest of my practice put together. They'll work like demons for months at a time and then try to make up for the loss of daily exercise and common sense routine by trying to crowd a year's recreation into a few weeks. They'll eat, and drink, too, a lot of stuff that's bad enough at home, but is doubly damaging when they take frequent business trips with irregular hours, heterogeneous food and the unavoidable strain of an exacting business. They are the worst spendthrifts of health that I know among intelligent men."

"At least they are not as bad as doctors", I replied to my friend's amazement. "When they

need medical service you've got to admit they don't go to quacks for it. They go to the reputable profession and to recognized specialists don't they?"

"What has that got to do with it?" the doctor asked. "Physicians can't avoid irregular hours, but they're not—"

"The argument is," I interrupted, "on the use of common sense, isn't it? You say that bond men don't use common sense about health. But as lax as they are in that, they are not as lavish in squandering health as physicians are in squandering money in so-called investments. Bond men at least exercise common sense enough to realize that it requires a doctor to exercise medical judgment for them. How many physicians realize that it requires a "doctor" of investments to select investment securities dependably? Ever hear of investment banker being swindled by a quack practitioner? How often are physicians swindled by quack investment schemes?"

"There are just two reasons why doctors, as a class, are notable for buying worthless securities. One of them is their failure to realize that in seeking good, sound investments you have to do exactly the same thing you do in seeking health—consult an honest, competent practitioner."

"What's the other reason why we buy worthless securities?" my friend asked with a smile. "Because doctors are not business men?"

"That's the reason usually given, but I don't believe there's anything to it. The second reason is too much optimism."

"There isn't one of you who doesn't believe that next year's practice is going to be a whole lot more remunerative than this year's. Your first years of practice, when you started with nothing and gradually built up your income, taught you that. It's firmly fixed, perhaps subconsciously, in every doctor's mind. It's a life thought-habit of the profession, besides being a somewhat common human trait."

"Well, if things are going to be better next year, I'll just take a few hundred dollars of the stock of this patent electrical device or in that new serum outfit, you argue. Thousands of little oil and mining companies have been organized in the last few years among little groups of friends in every town, city and hamlet

in the United States and have blown up after losing the money put into them. I'll wager that in every such little venture 90 per cent of them have had one or more physicians as stockholders. As a profession, you are so confidently optimistic you let your optimism run away with your better judgment, and you accumulate a lot of nondescript interests in a number of things you know nothing about and that have little or no value when your widow tries to realize on them."

"Yes, I guess some of that is possibly true," my friend admitted.

"True, of course, it's true. Six months ago I had a little ready money and I asked you to send me your bill. I telephoned you twice. I got that bill last week, six months after I had put my little ready money into some sound investments selected by an investment specialist and not by inexperienced friends or an easy-talking promoter. Now, when I'm shy of cash, you optimistically send me a bill. I'll bet you \$4 you are going to buy a new car. You are careless about collections, partly because it is in the code of your profession not to be mean and grasping. I honor you for that, but your eternal optimism is also a part cause. Oh, you say, I'll get more money next month; if not from Jones, from Smith. And you base your investments on the same kind of careless optimism."

"I'm serious in this, Roy. You wouldn't have a bit of sympathy for me if I disregarded the common sense that the medical profession has patiently drummed into the public for years, the fact that the public must consult reputable, competent medical advisors. You'd have a silent contempt for me if I let some quack or gaudy fake practice in my family or if I answered a cure-all medical advertisement.

"The so-called intelligent public has learned its lesson in medicine, that of consulting reputable practitioners. It is just as important that the medical public learn the same lesson as applied to investing on money. You nor no other physician can judge an investment security dependably, if you continue attending to your legitimate vocation. Even if you had time to do it, very frequently you haven't the facilities to determine the worth of a security. Investment banking is such a highly specialized

calling that I doubt if any man has the ability to perform the investment banker's work without adequate training in the work.

"Physicians should be the first persons in the world to recognize this fact, but strange to say many of them do not. As a consequence, they are notably heavy losers in bad investments. And the cure for this bad investment condition is the same as in a human pathological condition—consult the reputable specialist who is competent to treat the case."

Dr. Allen H. Bunce,

Editor Ga. State Med. Journal,

Atlanta, Ga.

Dear Doctor:

I am sending you a copy of an editorial from the Federal Union under date of March 28, 1837. This paper was published at this time in Milledgeville and was found in a tin box in the Corner Stone of the Academic Building of the old Oglethorpe University. The reference to the origin of Influenza and "La Grippe" perhaps is of some general interest, after eighty-five years.

"Influenza.—Through the past winter, this disease has prevailed extensively in Europe. In London, the mortality caused by it has been frightful; and the very numerous interments produced the most revolting hurry and crowding at the grave-yards. It was found necessary to admit none but relatives with the corpses; and policemen were stationed at the gates to exclude all other persons.

In Paris also it has caused a great number of deaths, especially among the poorer classes in the populous faubourgs. It is there called "La Grippe", on account of the spasms which it produces, attended with sore throat, and inflammation of the lungs and consequent difficult breathing. It has prevailed almost universally, but with lesser mortality among the higher classes; almost suspending business of the Chamber of Deputies; where, with characteristic levity, it is called the infulence."

Yours truly,

H. D. ALLEN, JR.

TENTH DISTRICT SOCIETY MEETS IN SANDERSVILLE

Place of Meeting: Court House.

9:00 a. m. to 10:00 a. m. Registration.

10:00 a. m. to 1.00 p. m. Scientific Discussion.

Invocation: Rev. N. T. Pafford.

Address of Welcome on Behalf of the Washington County Medical Society: Dr. E. S. Peacock, Harrison, Ga.

Address of Welcome on Behalf of the City of Sandersville: Rev. E. C. Orehood.

Response to Addresses of Welcome: Dr. T. E. Oertel, Augusta, Ga.

Practical Treatment of Diabetes Mellitus: Dr. F. B. Rawlings, Sandersville, Ga.

The Treatment of Malignancy: Dr. T. B. King, Sandersville, Ga.

Intravenous Anaesthesia: Dr. John C. Wright, Augusta, Ga.

Bacillary Dysentery: Dr. B. L. Helton, Deep Step, Ga.

Infant Welfare Work. (From the Out Patient Pediatric Clinic of the Medical Department of the University of Georgia, Augusta, Ga.): Drs. N. M. Moore, Joseph Akerman and H. P. Harrell.

Diagnosis of Chronic Maxillary Sinusitis: Dr. N. Overby, Sandersville, Ga.

Report of an Interesting Fracture: Dr. H. M. Michel, Augusta, Ga.

Election of Officers.

Barbecue Dinner, One O'Clock P. M., Fair Grounds.

Banquet at 7:00 P. M. at Rawling's Sanitarium of which Dr. W. B. Rawlings is the host.

You are urged to attend this meeting, and the local committee on arrangements requests the announcement that the ladies are cordially invited.

S. J. LEWIS, Secretary,
Augusta, Ga.

THIRD DISTRICT MEDICAL ASSOCIATION

Thirty-Third Semi-Annual Session, guest of Randolph County Medical Society at Cuthbert Georgia, Wednesday, Nov. 21st, 1923.

Program

Meeting place Andrew College Auditorium, Time 2:30 p. m. (C. T.)

Called to order.

Invocation—Dr. J. S. Grahl, Pastor Methodist Church.

Address of Welcome in behalf of city—Hon. Linton B. West, Mayor.

Address of welcome in behalf of Randolph County Medical Society—Dr. E. C. McCurdy.

Response to address of welcome in behalf Third District Medical Association—Dr. R. C. Montgomery, Butler, Ga.

Papers

1. "The Common Disease of the Eye"—Dr. F. M. Martin, Shellman, Ga.

Discussion—Dr. T. E. Bradley, Cordele, Ga.; Dr. L. F. Grubbs, Americus, Ga.; Dr. Jas. B. Laughlin, Eufaula, Ala.

2. "Serum Treatment of Malaria,—Dr. O. G. Cranford, Sasser, Ga.

Discussion—Dr. F. L. Cato, Americus, Ga.; Dr. O. W. Statham, Leesburg, Ga.; Dr. E. B. Anderson, Americus, Ga.

3. "General Consideration of the Cancer Problem with Special Reference to Mouth and Breast"—Dr. J. L. Campbell, Atlanta, Ga.

Discussion—Dr. B. Daniel, Cordele, Ga.; Dr. W. P. Coffee, Fitzgerald, Ga.; Dr. B. T. Wise, Plains, Ga.

4. "Our Profession"—Dr. F. M. Mullino, Montezuma, Ga.

Discussion—Dr. J. T. Stukes, Americus, Ga.; Dr. J. G. Dean, Dawson, Ga.

5. Report of Counselor of Third District—Dr. V. O. Harvard, Arabi, Ga.

Reading of minutes and general business.

Election of Officers.

Dinner 6:30 p. m. dinning room at Andrew College.

Visiting ladies will assemble at The Gay Hotel where they will be received by the Entertainment Committee, with an afternoon tea and Theater Party.

Ladies Arrangement Committee—Miss Annette McDonald, Chm. Together with the

doctors wives of Randolph County Medical Society.

You and your wife are cordially invited.

Officers

President, Dr. F. M. Mullino, Montezuma, Georgia; vice president, Dr. F. M. Martin, Shellman, Georgia; secretary and treasurer, Dr. Chas. A. Greer, Oglethorpe, Georgia.

Arrangement Committee

Dr. G. Y. Moore, Dr. F. D. Patterson, Dr. W. W. Crook, Dr. J. C. Patterson.

NEWS ITEMS

The friends of Dr. J. E. Wright will be interested to learn that he is now practicing in Alpine, Texas.

Dr. L. I. Lanier announces the removal of his residence and office from Wesley to Soper-ton.

Dr. Marvin F. Haygood announces his resignation from the Medical Staff of the Ga. State Board of Health to accept a general agency with the National Life Insurance Company of the U. S. A., Atlanta Trust Co. Bldg., Atlanta.

Dr. F. Phinzy Calhoun, Mrs. J. W. Oglesby, Jr., and Mrs. Stewart Witham, Jr., children of the late Dr. Abner Wellborn Calhoun, have made a "Founders' Roll" subscription of \$1,000 to the Stone Mountain Confederate Memorial.

Dr. E. W. Glidden, superintendent of the state tuberculosis sanitarium at Alto, was elected president of the Georgia Tuberculosis Association. Dr. T. B. Walker, Macon, and Dr. E. C. Thrash, Atlanta, were also elected to offices.

The Post Graduate Clinic for the General Practitioner, the first of its kind given in the South, was held at the Macon Hospital, Macon, under the auspices of the Bibb County Medical Society, November 5th through the 10th.

The 8th Annual Clinical Week of The American Congress on Internal Medicine will be held in the Hospitals, Clinics and Laboratories of the numerous educational institutions of St. Louis, Mo., week of February 17, 1924.

The Third District Medical Association met with Randolph County Medical Society, at Cuthbert, Ga., Wednesday, November 21, 1923.

The Tenth District Medical Society was en-

tertained at Sandersville, on Wednesday, November 7, 1923, by the Washington County Medical Society.

Dr. Joseph Jacobs, Atlanta, had as his guest Mr. J. Massey Rhynde, of New York, the noted sculptor who has been engaged to carve the statue of Dr. Crawford W. Long, discoverer of anesthesia, for the Hall of Fame, in Washington, D. C.

Among the doctors of Georgia reading papers at the Southern Medical Association, held at Washington, D. C., November 12-15 were:

Dr. Stewart R. Roberts, Atlanta, "Oration on Medicine"; Dr. W. A. Mulherin, Augusta, "The Diagnosis and Treatment of Intracranial Hemorrhage in the New Born"; J. E. Paullin, Atlanta, "Insulin in the Treatment of Severe Diabetes"; Dr. Lewis M. Gaines, Atlanta, "Vascular Crises in the Cerebral Circulation"; Dr. George W. Miles, Atlanta, opening discussion on a "Survey of Intestinal Parasites"; Dr. S. A. Visanska, Atlanta, "Tonguetie, an Important Factor in the Bottle-Fed Baby"; Dr. Charles Boynton, Atlanta, "Endocrine Therapy in Infancy and Childhood"; Dr. W. L. Funkhouser, Atlanta, "Treatment of Diarrhea"; Dr. Charles Boynton, Atlanta, "Pediatrics Popularized"; Dr. W. A. Mulherin, Augusta, "Malnutrition of School Children" and "Sickle Cell Anemia"; Dr. G. M. Niles, Atlanta, "Chronic Duodenal Stasis"; Dr. Lewis M. Gaines, Atlanta, "The Present Status of Intraspinal Therapy in the Treatment of Neurosyphilis"; Dr. J. Chester King, Atlanta, "The Parkinsonian Syndrome, a Late Sequel of Epidemic Encephalitis"; Dr. J. W. Landham, Atlanta, "Fractional Dose Method in the X-ray Treatment of Skin Malignancies"; Dr. Miller B. Hutchins, Atlanta, "A Treatment of Epidermomycoses of the Feet and Hands"; Dr. Dan Collier Elkin, Atlanta, "Biliary Obstruction"; Dr. F. G. Hodgson, Atlanta, "Malignancy in Bone"; Dr. Lawson Thornton, Atlanta, "Old Dislocation of Os Magnum; Open Reduction and Stabilization"; Dr. Thomas H. Hancock, Atlanta, "Conscious and Unconscious Exaggerations of Symptoms and the Methods of Differentiating Those Based Organic Changes from Those that Have a Psychogenic Foundation"; Dr. Cleveland Thompson, Millen, "Focal Infection as Met

With in Practice"; Dr. Joe P. Bowdoin, Adairsville, "Diagnosis and Treatment of Ruptured Duodenal Ulcer"; Dr. J. R. Garner, Atlanta, "Fractures of the Pelvis". Dr. T. E. Oertel, Augusta, "Fractures of the Larynx"; Dr. J. W. Palmer, Ailey, secretary of the Southern Railway Surgeons, Dr. Montague L. Boyd, Atlanta, and Dr. Edgar G. Ballenger, Atlanta, "Discussion Before Section of Urology". Dr. Boyd in another address on "Diagnosis and Treatment of Certain Conditions of the Vesical Neck"; talk on same subject by Dr. Ballenger and O. F. Elder. Dr. Dunbar Roy, Atlanta, "The Relations Between Diseases of the Eye and Ear." Dr. J. C. McDougal, Atlanta, "Parenternal Injections of Milk in the Therapeutics of Eye Diseases". Dr. H. A. Martin, Savannah, "Antesthetics in Ophthalmic Surgery".

EMORY UNIVERSITY GATE-WAY

Realizing the need of an appropriate entrance to the grounds of Emory University, such as practically all the great universities have, the Emory Womans Club has appointed a committee to perfect plans and raise funds for this purpose.

At a recent meeting of the committee it was decided to make this gate-way a memorial to the Emory men who took part in the world war. The committee has raised about \$200 as a nucleus to the necessary funds and now calls upon the alumni and friends of the university to assist in erecting this memorial.

Contributions will be gratefully received by the chairmen or other members of the committee.

Mrs. W. F. Melton and Mrs. Warren A. Candler, Chairmen; Mrs. T. H. Jack, Mrs. L. A. Fallagant, Mrs. P. E. Linebach, Mrs. M. T. Peed, Mrs. J. B. Peebles, Mrs. C. E. Boyd, Mrs. J. L. McGee.

DOCTOR WANTED

A village in southwest Georgia is in need of a physician. Has been the location of a doctor for forty-five years. Nearest competitor eight miles. Good country, churches, and schools. Will sell small stock of drugs and rent office for small sum.

Write "Village" care Journal.

RESOLUTIONS ON THE DEATH OF DR. JAS. M. CRAWFORD

We chronicle with sincere regret the death of Dr. James Madison Crawford, but cherish his memory as a man who walked with the good, loved his friends, sacrificed himself for the needy, and one whose earnestness and zeal in his professional work are worthy of emulation.

He lives in the hearts of many who will ever hold him dear and find an irreparable loss in his departure from life.

As a former member of the Fulton County Medical Society his fellowship and worth were highly appreciated by its members, therefore, be it resolved:

That the Secretary be instructed to inscribe upon the minutes of the Society a fitting tribute to his memory and his association with us, and to express our deep sympathy for his widow and family.

GEORGE H. NOBLE, Chairman,
HUGH LOKEY
R. R. DALY.

OBITUARY

Dr. C. N. Howard, Sr., Columbus, one of the best known practicing physicians in Chatahoochee County, died November 5th. He was the father of Dr. C. N. Howard, of Cusseta.

Dr. C. T. Gray, 62, one of the most influential men in Toombs County, died at his home in Lyons, Ga., November 5th.

Dr. S. B. Poland, for years a practicing physician in Jones County, died at the age of 62, from pneumonia.

Dr. A. G. Kelley, prominent Atlanta physician, was fatally injured November 3rd, when he was struck down by an automobile in front of his office on Forrest Avenue.

HIS POINT OF VIEW

A friend of ours went to a dentist and asked him to take a look at his teeth. The dentist did so and seemed full of admiration.

"What do you think of them?" asked the patient.

Directory

of the

Medical Association of Georgia

for 1923

NOTE: Corrected to December 1st, 1923. Please notify the Secretary-Treasurer promptly of any errors or omissions.

BALDWIN COUNTY

OFFICERS

President-----Allen, H. D., Sr.
Vice-President-----Oden, Jno. W.
Secretary-Treasurer-----McCalla, L. H.
Delegate-----Echols, Geo. L.

MEMBERS

Allen, E. W., Milledgeville.
Allen, W. H., Milledgeville.
Allen, H. D., Jr., Milledgeville.
Allen, H. D., Sr., Milledgeville.
Binion, Richard, Milledgeville.
Clayton, M. D., Covington, Ky.
Echols, Geo. L., Milledgeville.
Garrard, J. I., Milledgeville.
Key, F. P., Gordon.
Little, Y. A., Milledgeville.
Longino, L. P., Milledgeville.
McCalla, L. H., Milledgeville.
Oden, Jno. W., Milledgeville.
Petit, J. K., Milledgeville.
Scott, W. M., Devereux.
Swint, R. C., Milledgeville.
Thomas, N. R., Milledgeville.
Walker, N. F., Milledgeville.
Yarbrough, Y. H., Milledgeville.

BANKS COUNTY

OFFICERS

Secretary-Treasurer-----Harden, O. N.
Delegate-----Harden, O. N.

MEMBERS

Harden, O. N., Homer.
Jolley, J. S., Homer.

BARTOW COUNTY

OFFICERS

President-----Wofford, W. E.
Vice-President-----Adair, R. E.
Secretary-Treasurer-----Lowry, T.
Delegate-----Lowry, T.

MEMBERS

Adair, R. E., Cartersville.
Banks, G. T., Pine Log.
Battle, G. W., Cassville.
Bradford, H. B., Pine Log.
Bowdoin, J. P., Adairsville.
Ellis, Chas. L., Kingston.
Felton, Howard E., Cartersville.
Griffin, W. C., Cartersville.
Horton, A. L., Taylorsville.
Howell, S. M., Cartersville.
Lowry, T., Cartersville.
Monroe, D. H., Emerson.
Wilson, R. E., Cartersville.
Wofford, W. E., Cartersville.

BEN HILL COUNTY

OFFICERS

President-----Dorminy, W. D.
Vice-President-----Thornton, L. E.
Secretary-Treasurer-----Coffee, W. P.
Delegate-----Russell, E. A.

MEMBERS

Britt, J. N., Rochelle.
Coffee, W. P., Fitzgerald.
Dorminy, E. J., Fitzgerald.
Dorminy, W. D., Fitzgerald.
Frasier, J. L., Fitzgerald.
Luke, J. M. J., Fitzgerald.
Osborne, L. S., Fitzgerald.
Russell, E. A., Fitzgerald.
Thornton, L. E., Fitzgerald.
Ward, Frank, Fitzgerald.
Ware, R. M., Fitzgerald.
White, T. E., Fitzgerald.

BERRIEN-COOK COUNTIES.

OFFICERS

Secretary-Treasurer-----Rantz, L. S.

MEMBERS

Askew, P. H., Nashville.
Burch, R. N., Milltown.
Carter, L. A., Nashville.
Clements, H. W., Adel.
Etheridge, S. G., Sparks.
Hutchinson, L. R., Adel.
Lasseter, J. R., Nashville.
Lovett, L. B., Sparks.
Moore, W. A., Alapaha.
Paulk, Geo. A., Alapaha.
Rantz, L. S., Ray City.
Rantz, W. C., Nashville.
Shepard, W. M., Adel.
Smith, Lewis, Milltown.
Scruggs, C. G., Lenox.
Warrill, W. H., Sparks.
Webb, M. L., Nashville.

BIBB COUNTY

OFFICERS

President-----Hinton, C. C.
Vice-President-----Peavy, H. J.
Secretary-Treasurer-----Thompson, O. R.
Delegate-----Weaver, O. H.

MEMBERS

Adams, I. H., Macon.
Adams, J. F., Macon.
Anderson, C. L., Macon.
Anderson, J. C., Macon.
Bashinski, B., Macon.
Blackshear, T. E., Macon.
Brown, J. F., Lizella.
Carswell, N. T., Macon.
Cater, R. L., Jr., Macon.
Clark, M. A., Macon.
Cleghorn, C. D., Macon.
Coleman, Y. R., Macon.
Corn, Ernest, Macon.
Coward, J. W., Walden.
Du Pree, G. W., Gordon.
Daniel, Orman, Macon.
Derry, H. P., Macon.
DuGuird, J. W., Macon.
Fountain, J. A., Macon.
Garrard, J. A., Roberta.
Gostin, B. S., Macon.
Greene, B. W., Macon.
Hall, T. H., Macon.
Harrington, F. Y., Macon.
Harris, E. O., Byron.
Hartley, J. M., Macon.
Harriss, H. T., Macon.
Harrold, C. C., Macon.
Hembree, J. A., Macon.
Henderson, D. T., Macon.
Hinton, C. C., Macon.
Holmes, J. P., Macon.
Hurley, T. A., Macon.
Jackson, Max, Macon.
Jemison, A. B., Macon.
Johnson, B. M., Macon.
Johnston, F. C., Macon.
Johnson, G. L., U. S. P. Hospital,
Greenville, S. C.

Johnson, J. E. L., Roberta.
Kay, J. B., Byron.
Keen, O. F., Macon.
Kemp, A. P., Macon.
King, J. L., Macon.
Little, W. J., Macon.
Martin, J. W., Macon.
Massenburg, G. Y., Macon.
Meriwether, W. W., Macon.
Miller, G. T., Macon.
Mitchell, F. B., Macon.
Mobley, W. E., Macon.
Moore, J. M., Macon.
Moses, Harry, Macon.
McAfee, L. C., Macon.
McAfee, J. P., Macon.
Newman, W. A., Macon.

Parks, C. L., Macon.
Palmer, S. B., Macon.
Pate, J. C., Macon.
Peavy, H. J., Macon.
Pennington, C. L., Macon.
Post, W. D., Macon.
Pumpelly, W. C., Macon.
Respass, H., Macon.
Richardson, C. H., Jr., Macon.
Ridley, C. L., Macon.
Rogers, T. E., Macon.
Ross, J. T., Macon.
Rozar, A. R., Macon.
Rushin, W. P., Macon.
Sessions, J. H., Macon.
Sigman, J. M., Macon.
Spivey, O. S., Macon.
Sprague, F. A., Macon.
Stapler, M. H., Macon.
Stovall, R. H., Macon.
Thompson, O. R., Macon.
Walker, C. H., Macon.
Walker, D. D., Macon.
Walker, T. D., Jr., Macon.
Ward, J. B., Macon.
Weaver, O. H., Macon.
Webb, F. L., Macon.
White, W. S., Ft. Valley.
Winship, Herring, Macon.
Wright, J. E., Macon.

BLUE RIDGE COUNTY

OFFICERS

President-----Daves, J. M.
Vice-President-----Chastain, J. B.
Secretary-Treasurer-----Crawford, C. B.
Delegate-----Crawford, C. B.

MEMBERS

Chastain, J. B., Blue Ridge.
Crawford, C. B., Blue Ridge.
Daves, J. M., Blue Ridge.
Goss, N. C., Ellijay.
Rogers, W. H., Youngcane.
Wellborn, C. J., Blairsville.

BROOKS COUNTY

OFFICERS

President-----Smith, A. J.
Secretary-Treasurer-----Jelks, E. L.
Delegate-----McMichael, J. R.

MEMBERS

Felder, L. A., Quitman.
Jelks, E. L., Quitman.
McMichael, J. R., Quitman.
Smith, A. J., Quitman.
Smith, L. A., Quitman.

BULLOCH COUNTY

OFFICERS

President-----Cone, R. L.
Vice-President-----McElveen, J. M.
Secretary-Treasurer-----Floyd, F. F.
Delegate-----Mooney, A. J.

MEMBERS

Bowen, A. J., Portal.
Cone, R. L., Statesboro.
Deal, B. A., Statesboro.
Floyd, F. F., Statesboro.
Grooms, T. L., Stilson.
Jones, B. B., Metter.
Lively, M. M., Statesboro.
Miller, Clifford, Portal.
Mooney, A. J., Statesboro.
McElveen, J. M., Brooklet.
Olliff, H. H., Register.
Quattlebaum, A. W., Statesboro.
Stapleton, C. E., Brooklet.
Simmons, W. E., Metter.
Temples, A., Statesboro.
Watkins, E. C., Brooklet.
Whiteside, J. H., Statesboro.

BURKE COUNTY

OFFICERS

President-----Miller, R. L.
 Vice-President-----Byne, J. M.
 Secretary-Treasurer-----Macaulay, H. A.

MEMBERS

Byne, J. M., Waynesboro.
 Cook, J. M., Sardis.
 Cox, C. H., Waynesboro.
 Fulcher, M. O., Waynesboro.
 Hillis, W. W., Sardis.
 Lewis, J. B., Waynesboro.
 Lowe, W. R., Midville.
 Macaulay, H. A., Waynesboro.
 McCarver, W. C., Vidette.
 Miller, R. L., Waynesboro.
 Morton, H. J., Waynesboro.
 Smith, B. H., Keysville.

BUTTS COUNTY

OFFICERS

President-----Copeland, H. W.
 Vice-President-----White, A. F.
 Secretary-Treasurer-----Byron, J. L.
 Delegate-----White, A. F.

MEMBERS

Akin, B. F., Jenkinsburg.
 Byron, J. L., Jackson.
 Copeland, H. W., Jackson.
 Harper, J. W., Jenkinsburg.
 Howell, O. B., Jackson.
 Steele, W. H., Jackson.
 White, A. F., Flovilla.

CAMPBELL COUNTY

OFFICERS

President-----Jones, A. B.
 Vice-President-----Camp, R. T.
 Secretary-Treasurer-----Green, A. J.
 Delegate-----Camp, W. R.

MEMBERS

Bullard, T. P., Palmetto.
 Busey, T. J., Tyrone.
 Camp, R. T., Fairburn.
 Camp, W. R., Fairburn.
 Green, A. J., Union City.
 Hobgood, L. M., Fairburn.
 Jones, A. B., Tyrone.

CARROLL COUNTY

OFFICERS

President-----Fitts, C. C.
 Vice-President-----Goodwyn, H. J.
 Secretary-Treasurer-----Reese, D. S.
 Delegate-----Reese, D. S.

MEMBERS

Barker, H. L., U. S. V. Bureau, Atlanta.
 Baskin, C. L., Temple.
 Burnett, G. W., Whitesburg.
 Camp, J. B., Carrollton.
 Fitts, C. C., Carrollton.
 Griffies, J. C., Burwell.
 Griffin, Claude, Carrollton.
 Goodwyn, H. J., Carrollton.
 Hammond, G. W., Roopville.
 Kirby, E. G., Burwell.
 Lovorn, J. L., Bowdon.
 Nutt, J. J., Bowdon.
 Powell, B. C., Villa Rica.
 Powell, John, Villa Rica.
 Reese, D. S., Carrollton.
 Reeves, T. W., Carrollton.
 Roberts, O. W., Carrollton.
 Rogers, T. E., Waco.
 Scales, S. F., R. F. D., Carrollton.
 Smith, W. P., Bowdon.
 Styles, O. R., Bowdon.

CHATHAM COUNTY

OFFICERS

President-----Hesse, H. W.
 Vice-President-----DeCaradeuc, St. J. R.
 Secretary-Treasurer-----Demmond, E. C.
 Delegate-----Righton, H. Y.
 Delegate-----Myers, W. H.

MEMBERS

Adams, W. R., Savannah.
 Bassett, V. H., Savannah.
 Baker, J. O., Savannah.
 Barrow, Craig, Savannah.
 Bray, S. E., Savannah.
 Carter, J. N., Savannah.
 Corson, E. R., Savannah.
 Chisholm, J. F., Savannah.
 Cole, W. A., Savannah.
 Crawford, W. B., Savannah.
 Dancy, W. R., Savannah.
 Daniel, J. W., Savannah.
 DeCaradeuc, St. J. R., Savannah.
 Demmond, E. C., Savannah.
 Drane, Robt., Savannah.

Edwards, D. B., Savannah.

Egan, M. J., Savannah.
 Egloff, G. E., Savannah.
 Exley, H. T., Savannah.
 Faggart, G. H., Savannah.
 Groover, G. L., Savannah.
 Graham, R. E., Savannah.
 Harris, R. V., Savannah.
 Holton, C. F., Savannah.
 Hesse, H. W., Savannah.
 Hiers, J. L., Savannah.
 Howard, Lee, Savannah.
 Iseman, E., Savannah.
 Jones, Jabez, Savannah.
 Johnson, G. H., Savannah.
 Lang, G. N., Savannah.
 Lattimore, R., Savannah.
 Lee, Lawrence, Savannah.
 Levington, H. L., Savannah.
 Massoud, M. A., Pineora.
 Martin, H. H., Savannah.
 Martin, R. V., Savannah.
 Morrison, J. E., Savannah.
 Myers, W. H., Savannah.
 McGee, H. H., Savannah.
 Norton, W. A., Savannah.
 Olmstead, G. T., Savannah.
 O'Neil, J. C., Savannah.
 Osborne, E. S., Savannah.
 Redmond, C. G., Savannah.
 Righton, H. Y., Savannah.
 Shaw, L. W., Savannah.
 Smith, W. K., Pembroke.
 Smith, W. W., Cloy.
 Strickland, J. O., Pembroke.
 Tarver, H. R., Guyton.
 Thomas, M. R., Savannah.
 Touchton, G. P., Savannah.
 Tippins, H. L., Savannah.
 Train, J. K., Savannah.
 Usher, Chas., Savannah.
 Usher, J. A., Savannah.
 Usher, S., Savannah.
 Wahl, F., Savannah.
 Waring, A. J., Savannah.
 Waring, T. P., Savannah.
 White, G. R., Savannah.
 Williams, L. W., Savannah.

CHATTOOGA COUNTY

OFFICERS

President-----Shamblin, B. F.
 Vice-President-----Clements, J. W.
 Secretary-Treasurer-----Hall, F. W.
 Delegate-----Hall, F. W.

MEMBERS

Brown, H. D., Lyerly.
 Bryant, W. J., Summerville.
 Clements, J. W., Gore.
 Hall, F. W., Summerville.
 Jennings, E. M., Menlo.
 Mallicoat, L. A., Trion.
 Martin, G. F., Menlo.
 Shamblin, B. F., Lyerly.
 Tally, R. E., Trion.
 Wood, M. N., Menlo.
 Wright, C. M., Gore.

CHEROKEE COUNTY

OFFICERS

President-----Coker, N. J.
 Vice-President-----Bates, J. M.
 Secretary-Treasurer-----Brooke, Geo. C.
 Delegate-----Moore, R. M.

MEMBERS

Bates, J. M., Canton.
 Boring, Jas. R., Canton.
 Brooke, Geo. C., Canton.
 Coker, Grady, Canton.
 Coker, N. J., Canton.
 Hardin, D. A., White (Bartow Co.)
 Harbin, S. R., Canton.
 Moore, R. M., Waleska.
 Pettit, J. T., Canton.
 Vansant, T. J., Woodstock.

CLARKE COUNTY

OFFICERS

President-----Rayle, A. A.
 Vice-President-----Reynolds, H. I.
 Secretary-Treasurer-----Stewart, J. S., Jr.
 Delegate-----Gerdine, Linton

MEMBERS

Applewhite, J. D., Athens.
 Birdsong, H. W., Athens.
 Bloomfield, J. C., Athens.
 Cabaniss, W. H., Athens.
 Carlton, W. A., Athens.
 Chandler, B. B., Athens.
 Coffee, H. D., Athens.
 Coile, F. W., Winterville.
 Decker, C. J., Athens.

Dupree, D. H., Athens, (deceased.)

Fullilove, H. M., Athens.
 Gerdine, Linton, Athens.
 Goss, R. M., Athens.
 Green, W. L., Crawford.
 Hunnicutt, J. A., Athens.
 Holliday, J. C., Athens.
 Holliday, P. L., Athens.
 Matthews, M. F., Athens.
 McKinney, J. C., Athens.
 Middlebrooks, C. O., Athens.
 Patton, A. B., Athens.
 Proctor, J. P., Athens.
 Rayle, A. A., Athens.
 Reynolds, H. I., Athens.
 Smith, S. S., Athens.
 Stewart, J. S., Jr., Athens.

CLAYTON-FAYETTE COUNTY

OFFICERS

President-----Wallis, G. W.
 Vice-President-----Cannon, T. C.
 Secretary-Treasurer-----Kemper, H. D.

MEMBERS

Cannon, T. C., Jonesboro.
 Henry, J. Z., Ellenwood.
 Kemper, H. D., Jonesboro.
 Lester, J. A., Fayetteville.
 Malone, O. T., Fayetteville.
 Seawright, E. C., Fayetteville.
 Wallis, G. W., Fayetteville.
 Wallis, J. R., Lovejoy.

COBB COUNTY

OFFICERS

President-----Mims, Frank
 Vice-President-----Humphries, Will
 Secretary-Treasurer-----Blair, L. L.
 Delegate-----Blair, L. L.

MEMBERS

Bailey, E. M., Acworth.
 Blair, L. L., Marietta.
 Humphries, Will C., Acworth.
 Kemp, W. M., Marietta.
 Lindley, F. P., Powder Springs.
 Malone, J. D., Marietta.
 Mims, Frank, Marietta.
 Nolan, C. T., Marietta.
 Perkinson, W. H., Marietta.

COFFEE COUNTY

OFFICERS

President-----Smith, J. R.
 Vice-President-----Meeks, D. H.
 Secretary-Treasurer-----Clark, T. H.
 Delegate-----Coleman, A. S. M.

MEMBERS

Clark, T. H., Douglas.
 Coleman, A. S. M., Douglas.
 Hall, W. L., Nicholls.
 Meeks, D. H., Nicholls.
 Ricketson, G. M., Broxton.
 Sibbett, W. F., Douglas.
 Smith, J. R., Douglas.
 Whelchel, H. C., Douglas.

COLQUITT COUNTY

OFFICERS

President-----Daniel, Everett
 Secretary-Treasurer-----Stuart, M. H.

MEMBERS

Allen, M. Y., Moultrie.
 Brannen, C. C., Moultrie.
 Daniel, Everett, Moultrie.
 Lawson, E. L., Moultrie.
 Stuart, M. H., Moultrie.
 Summerlin, J. A., Hartsfield.

COWETA COUNTY

MEMBERS

Bailey, T. S., Newnan.

CRISP COUNTY

OFFICERS

Secretary-Treasurer-----Williams, H. J.

MEMBERS

Bradley, T. E., Cordele.
 Daniel, B., Cordele.
 Dorminy, J. N., Cordele.
 Flournoy, H. C., Warwick.
 Harvard, V. O., Arabi.
 Heyward, A. R., Warwick.
 Marshall, W. B., Cordele.
 Miller, W. A., Arabi.
 McArthur, T. J., Cordele.
 Otwell, J. A., Cordele.
 Smith, M. R., Cordele.
 Wallace, F. R., Cordele.
 Ward, J. A., Cordele.
 Ware, Ford, Cordele.
 Whelchel, A. J., Cordele.
 Williams, H. J., Cordele.

Williams, L. E., Cordele.
Williams, P. L., Cordele.
Williams, S. F., Cordele.

DECATUR-SEMINOLE COUNTIES

OFFICERS

President-----Chason, Gordon
Vice-President-----Spoonner, J. I.
Secretary-Treasurer-----Lewis, P. M.
Delegate-----Wheat, R. F.

MEMBERS

Alford, A. E. B., Bainbridge.
Bridges, R. L. Z., Brinson.
Chason, Gordon, Bainbridge.
Chason, Thos., Donaldsonville.
Christophine, S. A. V., Attapulgus.
Clark, Geo. T., Bainbridge.
Davis, E. S., Climax.
Lewis, P. M., Bainbridge.
Spengler, N. L., Tampa, Fla.
Spoonner, J. I., Donaldsonville.
Wheat, R. F., Bainbridge.
Wilkinson, W. L., Bainbridge.
Willis, L. W., Bainbridge.

DEKALB COUNTY

OFFICERS

President-----Ansley, Wiley S.
Vice-President-----Pattillo, Chas. E.
Secretary-Treasurer-----Pitman, J. F.

MEMBERS

Allgood, C. L., Scottdale.
Ansley, W. S., Decatur.
Daniel, J. C., Decatur.
Letson, F. H., Decatur.
Owens, W. H., Decatur.
Pattillo, C. E., Decatur.
Pitman, J. F., Decatur.
Pounds, J. E., Ingle side.
Wilson, B. V., Decatur.

DOOLY COUNTY

OFFICERS

President-----Mobley, H. A.

MEMBERS

Bishop, L. H., Unadilla.
Butler, W. I., Unadilla.
Bivins, T. F., Vienna.
Davis, E. B., Byromville.
Daves, V. C., Vienna.
Lee, J. L., Pinehurst.
Moye, T. R., Vienna.
Mobley, H. A., Vienna.
Pate, R. H., Unadilla.
Rose, J. R., Unadilla.
Williams, F. E., Vienna.

DOUGHERTY COUNTY

OFFICERS

President-----Wood, A. W.
Vice-President-----Benson, N. E.
Secretary-Treasurer-----Cook, W. S.
Delegate-----Davis, W. L.

MEMBERS

Barnett, J. M., Albany.
Benson, N. E., Albany.
Cook, W. S., Albany.
Dykes, C. Q., Albany.
Davis, W. L., Albany.
Hillsman, A. H., Albany.
Irvin, I. W., Albany.
Keaton, J. C., Albany.
Lott, Y. C., Albany.
Newell, C. E., Albany.
Portwood, O. F., Texarkana, Tex.
Pearson, R. J., Albany.
Redfearn, J. A., Albany.
Sapp, E. F., Albany.
Welch, L. E., Albany.
Wood, A. W., Albany.

DOUGLAS COUNTY

OFFICERS

President-----Houseworth, D.
Vice-President-----Hamilton, R. E.
Secretary-Treasurer-----Boyd, J. M.

MEMBERS

Boyd, J. M., Douglasville.
Hamilton, R. E., Douglasville.
Houseworth, D., Douglasville.
Poole, R. H., Douglasville.
Reid, W. H., Douglasville.
Vansant, C. V., Douglasville.
Whitley, T. R., Douglasville.

ELBERT COUNTY

OFFICERS

President-----Bond, W. L.
Vice-President-----Matthews, W. J.
Secretary-Treasurer-----Mattox, B. B.
Delegate-----Walker, O. B.

MEMBERS

Bailey, D. V., Elberton.

Bond, W. L., Dewyrose.
Gaines, T. H., R. F. D., Elberton.
Johnson, J. E., Elberton.
Mathews, W. J., Elberton (deceased).
Mattox, B. B., Elberton.
Smith, A. C., Elberton.
Stovall, A. S. J., Elberton.
Thompson, D. N., Elberton.
Walker, O. B., Bowman.
Ward, G. A., R. F. D. 1, Elberton.

EMANUEL COUNTY

OFFICERS

President-----Smith, Geo. L.
Vice-President-----Johnson, A. C.
Secretary-Treasurer-----Lanier, L. I.
Delegate-----Coleman, E. T.

MEMBERS

Bailey, J. D., Summertown.
Chandler, J. H., Swainsboro.
Coleman, E. T., Graymont.
English, R. E. L., Stillmore.
Franklin, R. C., Swainsboro.
Franklin, V. E., Graymont.
Johnson, A. C., Garfield.
Johnson, B. F., Garfield.
Lanier, L. I., Wesley.
Lucas, W. H., Stillmore.
Nunez, J. M., Swainsboro.
Smith, D. D., Swainsboro.
Stevens, A. T., Summit.
Smith, G. L., Swainsboro.
Youmans, S. S., Oakpark.
Youmans, L. P., Swainsboro.

FLOYD COUNTY

OFFICERS

President-----Garrard, J. L.
Vice-President-----Floyd, W. B.
Secretary-Treasurer-----McCord, M. M.
Delegate-----Wicker, R. H.

MEMBERS

Bellenger, J. P., Armuchee.
Battey, H. H., Rome.
Chandler, J. L., Rome.
Cheney, J. N., Silver Creek.
Cox, R. P., Rome.
Dellinger, A. H., Rome.
Elmore, B. V., Rome.
Floyd, W. B., R. F. D. No. 2, Rome.
Garrard, J. L., Rome.
Griffin, J. H., Armuchee (deceased).
Harbin, Maxwell, Rome.
Harbin, R. M., Rome.
Harbin, W. P., Rome.
Lewis, W. H., Rome.
Methvin, S. R., Lindale.
Moore, Clifford, Lindale.
Mull, J. H., Rome.
McArthur, C. H., Casapalca, Peru.
McCall, J. T., Rome.
McCord, M. M., Rome.
McKinney, W. T., Cave Springs.
Penn, B. W., Rome.
Routledge, A. F., Rome.
Shamblin, A. C., Rome.
Shaw, W. J., Rome.
Simmons, R. O., Rome.
Smith, G. B., Rome.
Turner, H. A., Rome.
Watts, J. C., Rome.
Wicker, R. H., Rome.

FULTON COUNTY

OFFICERS

President-----Donaldson, H. R.
Vice-President-----Person, W. E.
Secretary-Treasurer-----Clay, Grady E.

MEMBERS

Abercrombie, T. F., State Capitol, Atlanta.
Adams, H. M. S., Candler Bldg., Atlanta.
Adams, G. B., Emory University.
Adkins, W. N., 79 Forrest Ave., Atlanta.
Aiken, W. S., Hurt Bldg., Atlanta.
Allen, E. A., 20 Ponce de Leon Ave., Atlanta.
Almand, C. A., 79 Forrest Ave., Atlanta.
Amster, L., 15 W. Alexander St., Atlanta.
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Anderson, J. F., Hillsboro.
 Belcher, F. S., Monticello.
 Brown, J. A., Shady Dale.
 Cary, R. F., Monticello.

Payne, J. W., Monticello.
 Pittard, L. Y., Monticello.

JEFFERSON COUNTY

OFFICERS

President-----Pilcher, J. J.
 Vice-President-----Ketchin, S. C.
 Secretary-----Jordan, W. B.

MEMBERS

Farmer, L. P., Stapleton.
 Glover, J. M., Stapleton.
 Harvey, W. L., Bartow.
 Jordan, W. B., Bartow.
 Ketchin, S. C., Louisville.
 Lewis, J. R., Louisville.
 Pilcher, J. J., Wrens.

JENKINS COUNTY

OFFICERS

President-----Perkins, M. E.
 Secretary-Treasurer-----Thompson, C.
 Delegate-----Perkins, M. E.

MEMBERS

Jones, J. W., Thrift.
 Mulkey, Q. A., Millen.
 Perkins, M. E., Millen.
 Thompson, C., Millen.

JOHNSON COUNTY

OFFICERS

President-----Harris, T. L.
 Vice-President-----Brantley, J. G.
 Secretary-Treasurer-----Brantley, J. G.
 Delegate-----Brinson, R. E.

MEMBERS

Brantley, J. G., Wrightsville.
 Brinson, R. E., Wrightsville.
 Harris, T. L., Wrightsville.
 Harrison, D. C., Kite.
 Johnson, S. M., Wrightsville.

JONES COUNTY

OFFICERS

President-----Riley, J. H.
 Secretary-Treasurer-----Chambliss, P. R.
 Delegate-----Riley, J. H.

MEMBERS

Chambliss, P. R., Gray.
 Riley, J. H., Haddock.
 Zachary, J. D., Bradley.

LAMAR COUNTY

OFFICERS

President-----Rogers, J. M.
 Vice-President-----Suggs, C. E.
 Secretary-Treasurer-----Anderson, J. M.
 Delegate-----Corry, J. A.

MEMBERS

Anderson, J. M., Barnesville.
 Barron, J. M., R. F. D., Milner.
 Corry, J. A., Barnesville.
 Hucksby, A. H., Milner.
 Pritchett, D. W., Barnesville.
 Rogers, J. M., Barnesville.
 Suggs, C. E., Barnesville.
 Willis, C. H., Barnesville.

LAURENS COUNTY

OFFICERS

President-----Edmondson, J. W.
 Vice-President-----Thompson, Wm. C.
 Secretary-Treasurer-----Cheek, O. H.

MEMBERS

Benson, R. S., Dublin.
 Blackshear, T. J., Jr., Dublin.
 Brigham, W. R., Dublin.
 Barton, J. J., Dublin.
 Beddingfield, W. E., Rentz.
 Chappell, R. J., Dudley.
 Cheek, O. H., Dublin.
 Claxton, E. B., Dublin.
 Coleman, A. T., Dublin.
 Duggan, J. H., Irwinton.
 Edmondson, J. W., Dublin.
 Kea, T. B., Adrian.
 Montford, H. L., Dublin.
 New, J. E., Dexter.
 Parkerson, I. J., Cadwell.
 Shelnett, W. C., Montrose.
 Taylor, T. J., Rentz.
 Thompson, W. C., Dublin.
 Wall, T. H., Dublin.
 Walker, Sidney, Dublin.
 Weddington, J. L., Dublin.

LOWNDES COUNTY

OFFICERS

President-----Crozier, G. T.
 Vice-President-----Freeman, D. W.
 Secretary-Treasurer-----Smith, T. H.
 Delegate-----Wilson, J. C.

MEMBERS

Bird, Frank, Valdosta.

Crozier, G. T., Valdosta.
 Freeman, D. W., Valdosta.
 Griffin, A., Valdosta.
 Little, A. G., Valdosta.
 Mixson, J. F., Valdosta.
 Pennington, J. W., Howell.
 Pennington, T. E., Naylor.
 Prescott, J. P., Lake Park.
 Quarterman, P. C., Valdosta.
 Quillian, E. P., Olyattville.
 Smith, J. M., Valdosta.
 Smith, T. H., Valdosta.
 Talbot, T. M., Valdosta.
 Thomas, J. A., Valdosta.
 Thomas, F. H., Valdosta.
 Wilson, J. C., Valdosta.

MACON-TAYLOR COUNTIES

OFFICERS

Secretary-Treasurer-----Bryan, S. H.

MEMBERS

Bryan, S. H., Reynolds.
 Derrick, H. C., Oglethorpe.
 Fickling, C. F., Butler.
 Greer, C. A., Oglethorpe.
 Lightner, L. L., Ideal.
 Liggins, S. B., Montezuma.
 Mangham, J. E., Reynolds.
 Montgomery, R. C., Butler.
 Mullino, F. M., Montezuma.
 McGill, R. E., Montezuma.
 Richardson, C. H., Montezuma.
 Turk, T. G., Reynolds.

MADISON COUNTY

OFFICERS

President-----Roper, L. E.
 Vice-President-----Westbrook, R. J.
 Secretary-Treasurer-----Baker, J. L.

MEMBERS

Baker, J. L., Carlton.
 Roper, L. E., Comer.
 Westbrook, R. J., Ila.
 Whelchel, Fred C., Comer.

MERIWETHER COUNTY

MEMBERS

Brook, B. H., Greenville.
 Dixon, J. L., Woodbury.
 Gilbert, R. B., Greenville.
 Johnson, J. A., Manchester.
 Norman, Frank P., Greenville.
 Terrell, E. B., Greenville.
 Witt, M. S., Manchester.

MITCHELL COUNTY

OFFICERS

President-----Williams, B.
 Vice-President-----Lewis, F. L.
 Secretary-Treasurer-----Akridge, H. L.
 Delegate-----Spence, J. M.
 Alternate-----Roles, C. L.

MEMBERS

Akridge, H. L., Camilla.
 Beason, Lewis, Sale City.
 Belcher, D. P., Pelham.
 Brown, J. L., Camilla.
 Carreker, J. P., Cotton.
 Clements, J. R., Pelham.
 Hill, Roy, Pelham.
 Lewis, F. L., Camilla.
 Roles, C. L., Camilla.
 Spence, J. M., Camilla.
 Williams, B., Pelham.

MONROE COUNTY

OFFICERS

Secretary-Treasurer-----Smith, W. J.

MEMBERS

Alexander, G. L., Forsyth.
 Elrod, J. O., Forsyth.
 Goolsby, R. C., Jr., Forsyth.
 Goolsby, R. C., Sr., Forsyth.
 Ponder, W. P., Forsyth.
 Smith, B. L., Forsyth.
 Smith, W. J., Juliette.

MONTGOMERY COUNTY

OFFICERS

President-----Findley, C. W.
 Vice-President-----Moses, W. M.
 Secretary-Treasurer-----Hunt, J. E.
 Delegate-----Palmer, J. W.

MEMBERS

Findley, C. W., Uvalda.
 Hunt, J. E., Mt. Vernon.
 Moses, W. M., Uvalda.
 Palmer, J. W., Ailey.

MORGAN COUNTY

OFFICERS

President-----McGeary, W. C.
 Vice-President-----Prior, F. M.
 Secretary-Treasurer-----Nicholson, J. H.

Delegate-----Carter, D. M.

MEMBERS

Bell, A. K., Madison.
Carter, D. M., Madison.
Dickens, C. H., Madison.
Fambrough, W. M., Bostwick.
Gambrell, G. C., Rutledge.
McGeary, W. C., Madison.
Nicholson, J. H., Covington Apts.,
Philadelphia, Pa.
Porter, J. L., Rutledge.
Prior, F. M., Apalachee.
Riden, C. F., Bostwick.
Troutt, J. H., Madison.

MUSCOGEE COUNTY

OFFICERS

President-----Thrash, J. A.
Secretary-Treasurer-----Jordan, W. P.

MEMBERS

Anderson, J. M., Columbus.
Baird, W. W., Columbus.
Cooke, W. L., Columbus.
Delamar, Jas., Columbus.
Dexter, C. A., Columbus.
Dykes, A. N., Columbus.
Farley, W. E., Columbus.
Gautier, W. T., 1647 W. 11th St.,
Los Angeles, Calif.
Jameson, B. B., Columbus.
Jenkins, W. F., Columbus.
Johnson, C. D., Columbus.
Johnson, R. F., Columbus.
Jordan, W. F., Columbus.
Matthews, J. H., Columbus.
Mitchell, T. E., Columbus.
Munroe, H. S., Charlotte, N. C.
Murray, G. S., Columbus.
McDuffie, J. H., Sr., Columbus.
Pennington, M. F., Columbus.
Tatum, P. A., Columbus.
Thrash, J. A., Columbus.
Torbett, R. S., Columbus.
Winn, W. R., Columbus.
Whitehead, W. F., Columbus.
Wooldridge, J. C., Columbus.
Youmans, J. R., Columbus.
Young, S. E., Midland.

McDUFFIE COUNTY

OFFICERS

President-----Gibson, S.
Vice-President-----Gibson, W. A.
Secretary-Treasurer-----Pryce, R. Y.

MEMBERS

Colvin, F. G., Thomson.
Gibson, Sterling, Thomson.
Gibson, W. A., Thomson.
Pryce, R. Y., Thomson.

NEWTON COUNTY

OFFICERS

Secretary-Treasurer-----Travis, W. D.

MEMBERS

Hardman, Chas. T., R. F. D., Cov-
ington.
Lovelace, J. C., Porterdale.
Pharr, Lenard J., Covington.
Randle, J. H., Rt. 8, Covington.
Sams, J. R., Rt. 8, Covington.
Travis, W. D., Covington.
Waites, S. L., Covington.
Wilson, Pleas, Covington.

OCMULGEE SOCIETY

OFFICERS

President-----Smith, J. M.
Vice-President-----Coleman, W. A.
Secretary-Treasurer-----Pirkle, W. H.
Delegate-----Pirkle, W. H.

MEMBERS

Burns, A. B., Hawkinsville.
Brown, E. C., Hawkinsville.
Chambers, J. S., Chauncey.
Coleman, W. A., Eastman.
Collum, O. F., Chauncey.
Hendricks, J. H., Hawkinsville.
Massey, W. F., Chester.
Matthews, J. L., Hawkinsville.
Mathews, W. A., Hawkinsville.
Peacock, G., Hawkinsville.
Puett, W. W., Eastman.
Pirkle, W. H., Cochran.
Smith, A. L., Cochran.
Smith, J. M., Cochran.
Wall, J. C., Eastman.
Whipple, R. L., Cochran.
Wilkins, A. L., Eastman.
Williams, W. C., Cochran.

PICKENS COUNTY

MEMBERS

Atherton, H. G., Jasper.

PIKE COUNTY

OFFICERS

President-----Beauchamp, J. C.
Vice-President-----Head, D. L.
Secretary-Treasurer-----Head, M. M.
Delegate-----Head, M. M.

MEMBERS

Beauchamp, J. C., Williamson.
Beauchamp, W. L., Williamson.
Bramblett, J. C., Waldron, Kans.
Graves, J. R., Zebulon.
Grubbs, J. H., Molena.
Howard, I. B., Williamson.
Head, D. L., Zebulon.
Head, J. M., Zebulon.
Head, M. M., Zebulon.
Mallory, R. A., Concord.

POLK COUNTY

OFFICERS

President-----Richardson, E. H.
Secretary-Treasurer-----Whitely, S. L.
Delegate-----Richardson, E. H.

MEMBERS

Chaudron, P. O., Cedartown.
Cooper, J. J., Cedartown.
England, W. G., Cedartown.
Good, J. W., Cedartown.
Hall, H. M., Cedartown.
Howell, J. L., Aragon.
McBride, T. E., Rockmart.
Peck, C. W. R. F. D., Cedartown.
Pennington, J. E., Esom Hill.
Richardson, E. H., Cedartown.
Tison, W. W., Cedartown.
Whitely, S. L., Cedartown.
Wood, C. V., Cedartown.

PUTNAM COUNTY

OFFICERS

President-----Taliaferro, V. H.
Vice-President-----Griffith, E. F.
Secretary-----Clark, S. A.
Delegate-----Griffith, E. F.

MEMBERS

Clark, S. A., Eatonton.
Griffith, E. F., Eatonton.
Taliaferro, V. H., Eatonton.
Walker, E. Y., Willard.

RANDOLPH COUNTY

OFFICERS

President-----Harper, T. F.
Vice-President-----McCurdy, E. C.
Secretary-----Moore, G. Y.
Delegate-----Martin, F. M.

MEMBERS

Binion, W. W., Benevolence.
Crittenden, A. L., Shellman.
Crook, W. W., Cuthbert.
Gary, Loren, Georgetown.
Harper, T. F., Coleman.
Ingram, H. R., Coleman.
Martin, F. M., Shellman.
Moore, G. Y., Cuthbert.
McCurdy, E. C., Shellman.
McDonald, Annette, Cuthbert.
Patterson, F. D., Cuthbert.
Patterson, J. C., Cuthbert.
Rogers, F. S., Coleman.
Rogers, W. T., Coleman.
Shepard, J. L., Carnegie.
Weathers, A. F., Shellman.

RICHMOND COUNTY

OFFICERS

President-----Davidson, A. A.
Vice-President-----Battey, W. W.
Secretary-Treasurer-----Akerman, Jos.
Delegate-----Coleman, T. D.

MEMBERS

Akerman, J., Augusta.
Armstrong, R. M., Augusta.
Battey, W. W., Augusta.
Bernard, G. T., Augusta.
Bryans, C. I., Augusta.
Burdashaw, J. F., Augusta.
Butler, J. H., Augusta.
Baker, H. J., Augusta.
Blanchard, C. A., Augusta.
Boenes, M. C., Augusta.
Bryson, R. I., Augusta.
Byrd, T. Luther, Augusta.
Caldwell, J. M., Augusta.
Chaney, R. H., Augusta.
Coleman, T. D., Augusta.
Comey, P. P., Augusta.
Crane, C. W., Augusta.
Davis, T. L., Augusta.

Davidson, A. A., Augusta.
Doughty, W. H., Augusta (deceased).
Eve, H. J., Augusta.
Goodrich, W. H., Augusta.
Gray, J. D., Augusta.
Hankinson, S. H., Augusta.
Harris, R. L., Augusta.
Houston, W. R., Augusta.
Hull, J. M., Augusta.
Harrison, W. H., Augusta.
Horne, G. T., Augusta.
Jennings, N. D., Augusta.
Kellogg, W. C., Augusta.
Kershaw, M. M., Augusta.
Kilpatrick, A. J., Augusta.
Lamar, R. V., Augusta.
Lee, F. Lansing, Augusta.
Levy, M. S., Augusta.
Lewis, S. J., Augusta.
Lentz, C. S., Augusta.
Malone, H. H., Augusta.
Michel, H. M., Augusta.
Milligan, K. W., Augusta.
Mountain, G. W., Augusta.
Montgomery, C. J., Augusta.
Moore, N. M., Augusta.
Mulherin, F. X., Augusta.
Mulherin, W. A., Augusta.
Murphy, E. E., Augusta.
Neagle, Harry P., Augusta.
Oertel, T. E., Augusta.
Price, W. T., Augusta.
Page, H. N., Augusta.
Pund, Edgar R., Augusta.
Revel, S. T. R., Louisville.
Rhodes, R. L., Augusta.
Rice, E. P., Augusta.
Roberts, W. H., Augusta.
Robertson, J. R., Augusta.
Scharnitzky, E. O., Augusta.
Shaw, H. W., Augusta.
Silver, D. M., Augusta.
Sydenstricker, V. P., Augusta.
Tessier, L. P., Augusta.
Timmerman, J. P., McBean.
Timmons, C. C., Augusta.
Traylor, G. A., Augusta.
Tyler, L. V., Hephzibah.
Wilcox, E. A., Augusta.
Wright, J. C., Augusta.
Wade, A. C., Augusta.
Wright, P. B., Augusta.
Wright, T. R., Augusta (deceased).

SCREVEN COUNTY

OFFICERS

President-----Lewis, A. D.
Secretary-----Hannah, Louis
Treasurer-----Lanier, L. F.

MEMBERS

Doster, H. W., Rocky Ford.
Downing, E. E., Newington.
Lanier, L. F., Rocky Ford.
Lee, H. G., Woodcliff.
Lewis, A. D., Sylvania.
Evans, W. W., Halcyondale.
Hannah, Louis, Sylvania.
Lovett, W. R., Sylvania.
Mims, S. W., Sylvania.
Reddick, A. B., Sylvania.

SPALDING COUNTY

OFFICERS

President-----Frye, A. H.
Vice-President-----Anthony, E. R., Jr.
Secretary-Treasurer-----Sullivan, C. H.
Delegate-----Gable, L. M.

MEMBERS

Anthony, E. R., Jr., Griffin.
Gable, N. W., Brooks.
Miles, W. C., Griffin.
Anthony, E. R., Sr., Griffin.
Anthony, J. R., Griffin.
Austin, W. H., Griffin.
Carson, M. F., Griffin.
Conn, Webb, Griffin.
Drewery, T. E., Griffin.
Forrer, D. A., Griffin.
Frye, A. H., Griffin.
Gable, L. M., Griffin.
Griffith, C. F., Griffin.
Hawkins, T. I., Griffin.
Howard, W. S., Experiment.
Hunt, K. S., Griffin.
Sullivan, C. H., Griffin.
Thomas, J. M., Griffin.
Tucker, C. L., Griffin.

STEPHENS COUNTY

OFFICERS

President-----Terrell, J. H.
Vice-President-----Parker, W. H.
Secretary-Treasurer-----Ayers, C. I.

Delegate-----Crawford, Jas. H.

MEMBERS

Ayers, C. L., Toccoa.
Chaffin, E. F., Toccoa.
Craig, Alexander, Toccoa.
Crawford, J. H., Martin (deceased)
Davis, Jeff., Toccoa.
Isbell, J. E. D., Toccoa.
King, W. R., Toccoa.
McBath, W. L., Toccoa.
Parker, W. H., Toccoa.
Terrell, J. H., Toccoa.

STEWART-WEBSTER COUNTIES

OFFICERS

President-----Kenyon, J. M.
Vice-President-----Foster, J. H.
Secretary-Treasurer-----Walker, W. F.
Delegate-----Kenyon, J. M.

MEMBERS

Allen, R. H., Omaha.
Foster, J. H., Preston.
Greer, R. L., Lumpkin.
Kenyon, J. M., Richland.
Lovvorn, R. M., Richland.
Lunsford, C. G., Weston.
Pickett, O. E., Richland.
Sims, W. C., Richland.
Walker, W. F., Preston.
Walton, Milton, Lumpkin.

SUMTER COUNTY

OFFICERS

President-----Lunsford, J. F.
Vice-President-----Cato, F. L.
Secretary-Treasurer-----Anderson, E. B.
Delegate-----Wise, B. T.

MEMBERS

Allen, H. B., Americus.
Anderson, E. B., Americus.
Bagley, D. A., De Soto.
Bond, B. F., Americus.
Bridges, B. L., Ellaville.
Houston, W. H., Americus.
Lewis, Taylor, Americus.
Lunsford, J. F., Preston.
Cato, F. L., Americus.
Chambliss, J. W., Americus.
Glenn, R. P., Aberline, Tex.
Grubbs, L. F., Americus.
Jordon, J. R., Ellaville.
Logan, J. C., Plains.
Prather, W. S., Americus.
Simpson, H. T., Smithville.
Simpson, W. T., Plains.
Smith, H. A., Americus.
Stukes, J. T., Americus.
Wise, B. J., Plains.
Wise, B. T., Plains.
Wise, S. P., Plains.
Wood, Kenneth, Leslie.

TALBOT COUNTY

MEMBERS

Peeler, J. E., Woodland.
Weatherly, Eugene, Woodland.

TALIAFERRO COUNTY

OFFICERS

President-----Beasley, A. H.
Vice-President-----Bowdoin, W. H.
Secretary-Treasurer-----Rhodes, J. A.
Delegate-----Nash, T. C.

MEMBERS

Beasley, A. H., Crawfordville.
Bowdoin, W. H., Statham.
Nash, T. C., Philomate.
Ray, A. T., Sharon.
Rhodes, J. A., Crawfordville.

TATNALL-EVANS COUNTIES

OFFICERS

President-----Clanton, D. S.
Vice-President-----Harris, J. C.
Secretary-Treasurer-----Collins, J. O.
Delegate-----Hughes, J. M.

MEMBERS

Clanton, D. S., Hagan.
Collins, J. C., Manassas.
Daniel, J. W., Claxton.
Elarbee, G. W., Daisy.
Ellis, S. T., Hagan.
Harris, J. C., Collins.
Hughes, J. M., Glennville.
Kennedy, J. J., Collins.
Miller, B. E., Claxton.
Walling, C. B., Collins.
Watkins, J. J., Glennville.

TELFAIR COUNTY

OFFICERS

President-----Napier, Leroy
Vice-President-----Kennon, B. M.

Secretary-Treasurer-----Maloy, C. J.

Delegate-----Maloy, J. K.

MEMBERS

Maloy, C. J., Helena.
Maloy, H. S., Milan.
McMillan, T. J., Milan.
Neal, J. W., Scotland.
Turner, O. W., Helena.
Born, W. H., McRae.
Burch, G. A., Jacksonville.
Council, M. D., McRae.
Kennon, B. M., McRae.
Lucas, I. M., Towns.
Maloy, J. K., Milan.
Mann, Frank R., Lumber City.
Napier, LeRoy, Lumber City.
Powell, W. H., Lumber City.
Yawn, B. W., Milan.

TERRELL COUNTY

OFFICERS

President-----Dean, J. G.
Vice-President-----Holt, R. E.
Secretary-Treasurer-----Kenyon, S. P.
Delegate-----Dean, J. G.

MEMBERS

Arnold, J. T., Parrott.
Bowman, R. E., Bronwood.
Collum, Ein, Bronwood.
Chappell, Guy, Dawson.
Dean, J. G., Dawson.
Gardner, W. H., Dawson.
Holt, R. R., Parrott.
Kenyon, S. P., Dawson.
Lamar, Lucius, Dawson.
Lewis, J. H., Dawson.
Thomas, Logan, Dawson.

THOMAS COUNTY

OFFICERS

President-----Moore, H. M.
Vice-President-----Jarrell, W. W.
Secretary-Treasurer-----Cheshire, S. L.
Delegate-----Ainsworth, Harry

MEMBERS

Brannon, J. W. L., Pavo.
Fort, M. A., care State Board of Health, Atlanta.
King, J. T., Thomasville.
Norton, E. L., Coolidge.
Ainsworth, Harry, Thomasville.
Andrews, Agnew, Thomasville.
Cheshire, S. L., Thomasville.
Chestnutt, T. H., Coolidge.
Crowe, W. H., Pavo.
Erickson, Mary J., Thomasville.
Ferguson, C. H., Thomasville.
Harris, J. E., Pavo.
Isler, J. N., Meigs.
Jarrell, W. W., Thomasville.
Jennings, W. J., Thomasville.
Jones, H., Coolidge.
Kennedy, T. J., Coolidge, (deceased)
King, J. M., Metcalf.
Little, A. D., Thomasville.
Lundy, L. L., Boston.
Moore, H. M., Thomasville.
McLean, E. K., Thomasville.
Palmer, J. B., Thomasville.
Reid, Jas. W., Thomasville.
Sanchez, S. E., Barwick.
Summerlin, J. L., Meigs.
Vann, H. A., Boston.
Wall, C. K., Thomasville.
Watt, C. H., Thomasville.
Winchester, Millard, Thomasville.

TIFT COUNTY

OFFICERS

President-----Harrell, D. B.
Vice-President-----Hendricks, W. H.
Delegate-----Baker, L. A.

MEMBERS

Baker, L. A., Tifton.
Dinsmore, V. F., Tifton.
Hamilton, C., Lenox.
Harrell, D. B., Tifton.
Hendricks, W. H., Tifton.
Julian, G. W., Tifton.
Pittman, C. S., Tifton.

TOOMBS COUNTY

OFFICERS

President-----Mercer, J. E.
Vice-President-----Aaron, I. E.
Secretary-Treasurer-----Odum, W. W.

MEMBERS

Aaron, I. E., Lyons.
Curie, M. L., Vidalia.
Hall, J. K., Lyons.
Odum, W. W., Lyons.
Mercer, J. E., Vidalia.

Thompson, T. C., Vidalia.

TURNER COUNTY

OFFICERS

President-----Turner, W. J.
Vice-President-----Bradley, J. W.
Secretary-Treasurer-----Moore, J. T.
Delegate-----McElroy, J. W.

MEMBERS

Baxter, J. H., Ashburn.
Belflower, H. M., Sycamore.
Bradley, J. W., Ashburn.
Harrison, W. A., Sycamore.
Luke, D. P., Ashburn.
Moore, J. T., Sycamore.
McElroy, J. W., Ashburn.
Rogers, F. W., Ashburn.
Story, W. L., Ashburn.
Turner, W. J., Ashburn.

TRI COUNTY

OFFICERS

President-----Cheshire, J. L.
Vice-President-----Hays, W. C.
Secretary-Treasurer-----Sharp, C. K.
Delegate-----Hays, W. C.

MEMBERS

Barksdale, C. R., Blakely.
Beard, J. S., Edison.
Bridges, B. L., Morgan.
Bridges, R. R., Leary.
Cheshire, J. L., Damascus.
Crozier, J. H., Cedar Springs.
Fitzgerald, P. H., Blakely.
Griffin, P. E., Edison.
Hays, W. C., Colquitt.
Hendry, J. H., Morgan.
Holland, S. P., Blakely.
Jenkins, C. J., Edison.
Johnson, B. T., Bluffton.
Keaton, P. H., Damascus.
Roberts, C. A., Morgan.
Sharp, C. K., Arlington.
Shepard, W. O., Bluffton.
Simmons, B. K., Blakely.
Smith, E. C., Jakin.
Standifer, J. G., Blakely.
Standifer, W. E., Blakely.
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